

Clean Waterways, Healthy City: Long-Term Trash Load Reduction Plan and Assessment Strategy

Submitted by:

City of San José

200 East Santa Clara Street, San José, CA 95113

In compliance with Provisions C.10.c of Order R2-2009-0074



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ABBREVIATIONS

ARRA	American Recovery and Reinvestment Act
ARS	Automatic Retractable Screens
BASMAA	Bay Area Stormwater Management Agencies Association
BID	Business Improvement District
BI	Business Intelligence
BMP	Best Management Practices
BYOB	Bring Your Own Bag
CCHC	Clean Creeks, Healthy Communities
CCAG	Creek Connections Action Group
CDS	Continuous Deflection Separator
CEQA	California Environmental Quality Act
CM	Curb Miles
CPS	Connector Pipe Screen
EP3	Environmentally Preferable Procurement Policy
FY	Fiscal Year
MRP	Municipal Regional Stormwater NPDES Permit
NPDES	National Pollutant Discharge Elimination System
PRNS	Parks, Recreation, and Neighborhood Services Department
PBID	Property Based Improvement District
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SFEP	San Francisco Estuary Partnership
SWRCB	State Water Resource Control Board
TMA(s)	Trash Management Area(s)
TMDL	Total Maximum Daily Load
US EPA	United States Environmental Protection Agency
Water Board	San Francisco Bay Regional Water Quality Control Board

PREFACE

This Long-Term Trash Load Reduction Plan and Assessment Strategy (Long-Term Plan) is submitted in compliance with provision C.10.c of the Municipal Regional Stormwater NPDES Permit (MRP) for Phase I communities in the San Francisco Bay Area (Order R2-2009-0074). The Long-Term Plan was developed using a regionally consistent outline and guidance developed by the Bay Area Stormwater Management Agencies Association (BASMAA) and reviewed by San Francisco Bay Regional Water Quality Control Board (Water Board) staff. The Long-Term Plan is consistent with the Long-Term Trash Load Reduction Framework developed in collaboration with Water Board staff. Its content is based on the City of San José's current understanding of trash problems within its jurisdiction and the effectiveness of control measures designed to reduce trash impacts associated with Municipal Separate Storm Sewer (MS4) discharges. This Long-Term Plan is intended to be iterative and may be modified in the future based on information gained through the implementation of trash control measures. The City of San José (the City) therefore reserves the right to revise or amend this Long-Term Plan at its discretion. The San José City Council maintains discretion over the level of expenditures for trash control measures and service level implementation in accordance with the City's annual budget process, the City Charter, and the San José Municipal code. Inclusion of a proposed trash control measure or action in this Long-Term Plan does not obligate the City of San José to implement it. If significant revisions or amendments are made by the City of San José, a revised Long-Term Plan will be submitted to the Water Board through the City of San José's annual reporting process.

PREAMBLE: A VISION OF CLEAN WATERWAYS AND A HEALTHY CITY

The City of San José is pleased to submit its Long-Term Trash Load Reduction Plan in fulfilling Provision C.10.c of Order R2-2009-0074. More than a compliance document, this plan is an acknowledgement of the City's understanding that the achievement of trash free waterways is integral to a healthy city. The prevalence of trash in San José waterways is not only associated with the health of the local creeks but also typically correlative to a range of other social and economic conditions that can impede the well-being of San José neighborhoods.

By reducing the trash and reviving the health of San José urban creeks, the City of San José will improve the appeal of creek open space for residents, since many of the City's most prominent parks are located along its riparian corridors. As the City fills with urban villages and denser development, these riparian open spaces will become indispensable resources for the health of our communities. Denser living requires well planned, safe, clean spaces for people to gather, exercise, and share in community. The current state of many of our creeks has been significantly degraded by trash and neglect. Any vision of vibrant and healthy communities in San José must include revitalized waterways, free of trash and litter, that will support a healthier lifestyle for the people of San José.

The trash generation modeling used to estimate trash loads in the entire region has identified several land use and socio-economic factors in forecasting trash loads. Studies in San José determined that trash generation correlates with many other community conditions including graffiti and gang violence and lower participation in other municipal environmental programs such as curbside recycling and household hazardous waste disposal. These correlations are at the center of San José's strategy to broaden the capacity of the City to reach a greater audience in the community as well as our ability to leverage resources of other public and non-governmental agencies who are already working to improve the quality of life in San José neighborhoods. Examples of new programs where San José is using a collaborative approach to reduce trash and improve community well-being include:

- Collaboration among City departments, including Environmental Services, Police, and Code Enforcement, to leverage anti-gang resources to control blight and litter in gang hotspots throughout the City through community engagement and enforcement.
- Coordination with the City of San José Housing Department's new Place-Based Neighborhoods Program, a joint program of the City and non-profits to address blight and infrastructure improvements in response to neighborhood priorities. This initiative is part of a larger effort to create clean, safe, and engaged neighborhoods.
- Continuation of the Clean Creeks, Healthy Communities program in partnership with the US EPA, Santa Clara Valley Water District, and other outside agencies. This project, aimed at preventing trash pollution in Coyote Creek, has completed the second year of its four year term and can be credited with expanding the City's capacity to respond to homelessness and increasing the level of creek awareness among the residents living adjacent to the creek.

The initial partnerships identified in this plan are key first steps to the long-term success and sustainability of the City's trash reduction efforts. The City will continue to seek out new and innovative partnerships with local organizations and agencies to further broaden our resource base with those entities that share the common goal of improving community health and well-being.

The Approach and Progress of Trash Management Area Development

The City of San José has 30,538 acres, approximately one-third of the city's total area, designated as either very high, high, or medium trash generating areas. These areas have been parsed into 47 discrete Trash Management Areas (TMAs). This area is equivalent to the entire area of the City and County of San Francisco.

Of the 47 TMAs identified in this plan, the City has thus far identified specific programming for 14 TMAs. The remaining 33 TMAs will require more detailed assessment and study to better understand the intricacies of each TMA and subsequently determine the most appropriate and cost-effective approach to reducing trash for each respective area. The analysis and programming has two broadly defined steps:

1. Evaluate all new control measures being implemented in the 2009-2014 timeframe to determine effectiveness, appropriateness for implementation in other TMAs, and opportunities for improvement and adaptation.
2. Further assess TMAs for which control measures have yet to be specifically programmed and determine site-specific actions for each specific TMA. The City of San José proposes using the annual report process to update the San Francisco Bay Regional Water Quality Control Board on its progress in implementing Post-2014 actions.

As part of the analysis and programming exercise for the remaining 33 TMAs, the City of San José will establish a prioritization of the TMAs by assessing several key factors:

1. Evaluate the severity of each TMA's trash burden based on visual assessments, local knowledge, and predominance of very high, high, and/or medium trash generation areas.
2. Examine each TMA which has yet to be definitively programmed with trash reduction actions and consider the efficacy of possible options. This includes evaluating full-capture or full-capture equivalency candidacy.
3. Assess the relative costs and benefits of implementation in each TMA.
4. Identify any opportunities to leverage the activities of other community service programs working in the TMA.
5. Estimate the amount of progress that the City can reasonably expect from that area.

The additional prioritization, analysis, and programming for the remaining 33 areas will be completed by the end of FY 15-16. The City will provide continual TMA updating of planning and implementation activity as part of the annual report process.

1.0 INTRODUCTION

1.1 Purpose of Long-Term Trash Reduction Plan

The Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit for Phase I communities in the San Francisco Bay Area (Order R2-2009-0074), also known as the Municipal Regional Permit (MRP), became effective on December 1, 2009. The MRP applies to 76 large, medium, and small municipalities (cities, towns and counties) and flood control agencies in the San Francisco Bay Region, collectively referred to as Permittees. Provision C.10.c of the MRP requires Permittees to submit a *Long-Term Trash Load Reduction Plan* (Long-Term Plan) by February 1, 2014. Long-Term Plans must describe control measures that are currently being implemented, including the level of implementation, and additional control measures that will be implemented and/or increased level of implementation designed to attain a 70% trash load reduction by July 1, 2017 and 100% (i.e., “No Visual Impact”) by July 1, 2022.

This Long-Term Plan is submitted by the City of San José in compliance with MRP provision C.10.c. Consistent with provision C.10 requirements, the goal of the Long-Term Plan is to solve trash problems in receiving waters by reducing the impacts associated with trash in discharges from the City of San José’s municipal separate storm sewer system (MS4) that are regulated by NPDES Permit requirements. The Long-Term Plan includes:

1. Descriptions of the current level of implementation of trash control measures and the type and extent to which new or enhanced control measures will be implemented to achieve a target of 100% (i.e., full) trash reduction from MS4s by July 1, 2022, with an interim milestone of 70% reduction by July 1, 2017;
2. A description of the *Trash Assessment Strategy* that will be used to assess progress towards trash reduction targets achieved as a result of control measure implementation; and,
3. Time schedules for implementing control measures and the assessment strategy.

The Long-Term Plan was developed using a regionally consistent outline and guidance developed by the Bay Area Stormwater Management Agencies Association (BASMAA) and reviewed by the San Francisco Bay Regional Water Quality Control Board (Water Board) staff. The Long-Term Plan is consistent with the Long-Term Trash Load Reduction Framework (see section 1.2.1) developed in collaboration with Water Board staff. Its content is based on the City of San José’s current understanding of trash problems within its jurisdiction and the effectiveness of control measures designed to reduce trash impacts associated with MS4 discharges. The Long-Term Plan builds upon trash control measures implemented by the City of San José prior to the adoption of the MRP and during the implementation of the Short-Term Trash Load Reduction Plan submitted to the Water Board on February 1, 2012.

In addition to fulfilling a requirement of the MRP, the Long-Term Trash Load Reduction Plan acknowledges the City’s understanding that the achievement of clean waterways leads to the vision of a healthy city. Reviving our urban creeks will provide open space for residents since many of the City’s most prominent parks are located along its riparian corridors. As the City fills with urban villages and denser development, these riparian open spaces will become indispensable resources for the health of our communities. Denser living requires well planned,

safe, clean spaces for people to gather, exercise, and share in community. The current state of many of our creeks has been significantly degraded by trash and neglect. Any vision of vibrant and healthy communities in San José must include revitalized waterways, free of trash and litter, which will support a healthier lifestyle for our City.

The Long-Term Plan was reviewed and approved for submittal by the City of San José's Council on January 14, 2014. The City of San José's Staff Report is attached as Appendix A. On December 2, 2013 a Staff Report on the development of the City's Long-Term Trash Load Reduction Plan and Assessment Strategy was presented to the Council's Transportation and Environment Committee. This report is attached as Appendix B.

1.2 Background

1.2.1 Long-Term Trash Load Reduction Plan Framework

A workgroup of MRP Permittees, Bay Area countywide stormwater program staff, and Water Board staff met between October 2012 and March 2013 to better define the process for developing and implementing Long-Term Plans, methods for assessing progress toward reduction goals, and tracking and reporting requirements associated with provision C.10. Through these discussions, an eight-step framework for developing and implementing Long-Term Plans was created by the workgroup (Figure 1).

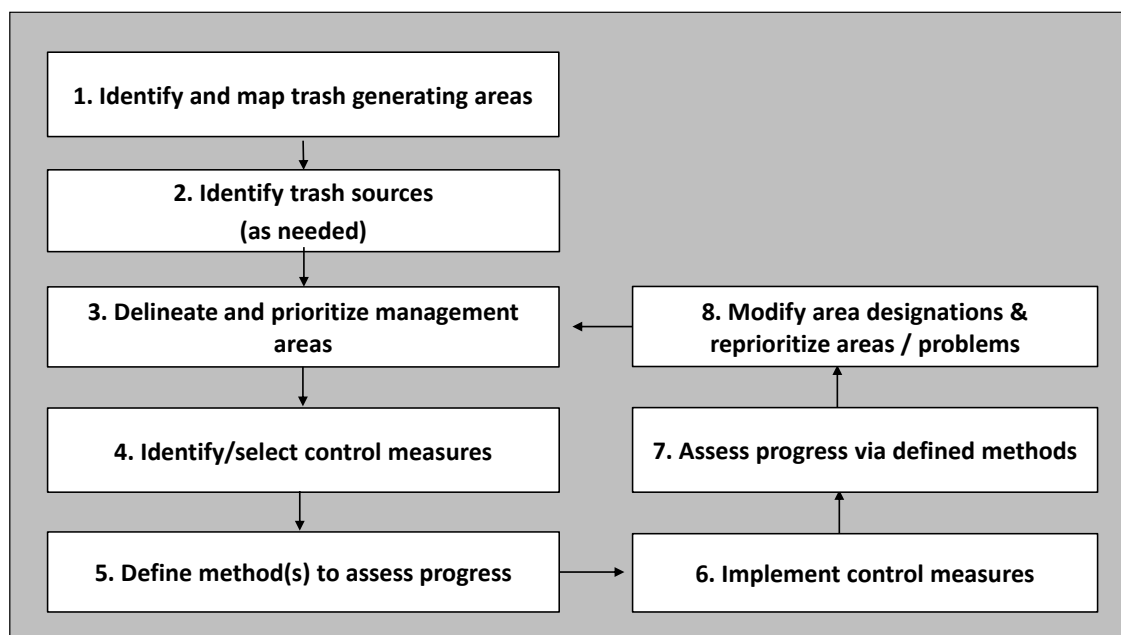


Figure 1. Eight-step framework for developing, implementing, and refining Long-Term Trash Reduction Plans

The workgroup agreed that as the first step in the framework, Permittees would identify very high, high, medium, and low trash generating areas in their jurisdictional areas. Trash generation rates developed through the *BASMAA Baseline Trash Generation Rates Project* (as discussed below) were used as a starting point for differentiating and delineating land areas with varying levels of trash generation. Permittees would then use local knowledge and field and/or

desktop assessments to confirm or refine the level of trash generation for specific areas within their jurisdiction. Each Permittee would then develop a map depicting trash generation categories within their jurisdiction.

As a next step, Permittees would then delineate and prioritize Trash Management Areas (TMAs) where specific control measures exist or are planned for implementation. TMAs delineated by Permittees are intended to serve as reporting units in the future. Reporting at the management area level provides the level of detail necessary to demonstrate implementation and progress towards trash reduction targets.

Once control measures are selected and implemented, Permittees will evaluate progress toward trash reduction targets using outcome-based assessment methods. As the results of the progress assessments are available, Permittees may choose to reprioritize trash management areas and associated control measures designed to improve trash reduction within their jurisdictions.

1.2.2 BASMAA Generation Rates Project

Through approval of a BASMAA regional project in 2010, Permittees agreed to work collaboratively to develop a regionally consistent method to establish trash generation rates within their jurisdictions. The project also known as the *BASMAA Trash Generation Rates Project* (Generation Rates Project) assisted Permittees in establishing the rates of trash generation and identifying very high, high, medium and low trash generating areas.

The term “trash generation” refers to the rate at which trash is produced or generated onto the surface of the watershed and is potentially available for transport via MS4s to receiving waters. Generation rates do not explicitly take into account existing control measures that intercept trash prior to transport. Generation rates are expressed as trash volume/acre/year and were established via the Generation Rates Project.

In contrast to trash generation, the term “trash loading” refers to the rate at which trash from MS4s enters receiving waters. Trash loading rates are also expressed as trash volume/acre/year and are equal to or less than trash generation rates because they account for the effects of control measures that intercept trash generated in an area before it is discharged to a receiving water. Trash loading rates are specific to particular areas because they are dependent upon the effectiveness of control measures implemented within an area. Figure 2 illustrates the difference between trash generation and loading.

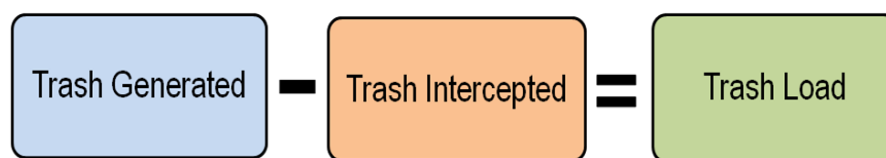


Figure 2. Conceptual model of trash generation, interception, and load

Trash generation rates were estimated based on factors that significantly affect trash generation (i.e., land use and income). The method used to establish trash generation rates for each Permittee builds off “lessons learned” from previous trash loading studies conducted in urban areas (Allison and Chiew 1995; Allison et al. 1998; Armitage et al. 1998; Armitage and

Rooseboom 2000; Lippner et al. 2001; Armitage 2003; Kim et al. 2004; County of Los Angeles 2002, 2004a, 2004b; Armitage 2007). The method is based on a conceptual model developed as an outgrowth of these studies (BASMAA 2011b).

Trash generation rates were developed through the quantification and characterization of trash captured in Water Board-recognized full-capture treatment devices installed in the San Francisco Bay Area. Trash generation rates estimated from this study are listed for each land use type in Table 1. Methods used to develop trash generation rates are more fully described in BASMAA (2011b, 2011c, and 2012).

Table 1. San Francisco Bay Area trash generation rates by land use (gallons/acre/year)

Land Use	Low ^b	Best ^b	High ^b
Commercial & Services	0.7	6.2	17.3
Industrial	2.8	8.4	17.8
Residential ^a	0.3 - 30.2	0.5 - 87.1	1.0 - 257.0
Retail ^a	0.7 - 109.7	1.8 - 150.0	4.6 - 389.1
K-12 Schools	3	6.2	11.5
Urban Parks	0.5	5.0	11.4

^a For residential and retail land uses, trash generation rates are provided as a range that takes into account the correlation between rates and household median income.

^b For residential and retail land uses: Low = 5% confidence interval; Best = best fit regression line between generation rates and household median income; and High = 95% confidence interval. For all other land use categories: High = 90th percentile; Best = mean generation rate; and Low = 10th percentile.

1.2.3 Short-Term Trash Load Reduction Plan

In February 2012, the City of San José developed a Short-Term Plan that described the current level of control measures implementation and identified the type and extent to which new or enhanced control measures would be implemented to attain a 40% trash load reduction from its MS4 by July 1, 2014. Since that time, the City of San José has begun to implement its Short-Term Plan. Control measures implemented to date via the Short-Term Trash Load Reduction Plan are:

- **Single Use Carryout Bag Ban Ordinance:** In January 2012, the City implemented a Single-Use Carryout Bag Ban Ordinance becoming the largest city in the state to ban plastic carryout bags. There has been extensive outreach to the community in multiple languages.
- **Expanded Polystyrene Food Ware Phase-Out Ordinance:** In September 2013, Council approved an ordinance to phase-out the use of polystyrene food ware in restaurants. San José is the largest city in California to adopt such an ordinance to date. There has been extensive outreach to the community in multiple languages.
- **Clean up of 32 Hotspots:** Completed annual clean up of all 32 hot spots to a level of “no visible impact” from trash, removing a 3 year aggregate total of 491 cubic yards.
- **Post MRP Street Sweeping with “No Parking” Signage:** The City has implemented an additional 44.4 curb miles of restricted parking to enhance street sweeper performance in areas identified to have “high” and “medium” trash loading.
- **Installation of continuous deflection separators (CDS) – Full Trash Capture Devices:** Installation of nine CDS systems that fully capture trash in the City’s storm

drain system for 1,272 acres of the City, 42 percent more area than required by the MRP's 898 acre full trash capture requirement for San José. While the City received a federal ARRA grant of \$687,000, the total cost of this project was \$2.8 million. The balance was paid by the City of San José Stormwater Fund.

- **Partial-Capture Devices:** The City will be conducting a pilot utilizing automatic retractable screens (ARS) in FY 13-14. The pilot would include approximately one hundred inlets in a neighborhood with high and medium trash loading. For this pilot, the Environmental Services Department selected a neighborhood and surrounding streets that already have parking restrictions and enforcement in place for street sweeping. Evaluation of this control measure will be conducted by BASMAA staff to determine efficacy for Region-wide implementation.
- **Community Engagement – Clean Creeks Healthy Communities Project:** Clean Creeks, Healthy Communities is an integrated, multi-disciplinary, four-year project aimed at preventing trash pollution in Coyote Creek that results from littering, illegal dumping, and homeless encampments. The goals of this project are to engage the community to clean the Coyote Creek and corridor; deter trash generating behaviors through passive and active monitoring; and promote greater engagement by the community with their local creek by working to increase the number of residents engaged in creek stewardship activities. This project is jointly funded by the City of San José, US EPA – Water Quality Improvement Fund Grant, Santa Clara Valley Water District, and the eBay Foundation.
- **Community Engagement – Anti-Litter Program:** The City has an on-going Anti-Litter Program that recruits and supplies volunteers to remove litter from City streets and neighborhoods. The Anti-Litter program organizes volunteer groups for one-day events and individuals to adopt litter hot spots or clean their neighborhood on an on-going basis. The Great American Litter Pick-Up is an annual volunteer event organized in coordination with the City's on-going Anti-Litter Program and completed through volunteer engagement in each of the 10 City Council districts.
- **Community Engagement – Volunteer Creek Cleanups:** Volunteer creek cleanups are conducted twice per year in connection with California Coastal Cleanup Day and the National River Cleanup Day. The City hosts clean-up sites in San José for both events. Since the effective date of the MRP these events have removed an aggregate total of 138 tons from local waterways.

Control measures described in this Long-Term Plan build upon actions taken to-date via the City of San José's Short-Term Plan. A full description of control measures implemented via Short and Long-Term Plans is included in section 3.2. Outcomes associated with Short-Term Plan implementation will be reported in the City of San José's FY13-14 Annual Report, scheduled for submittal to the Water Board by September 15, 2014.

1.3 Organization of Long-Term Plan

This Long-Term Plan is organized into the following sections:

- 1.0 Introduction;
- 2.0 Scope of the Trash Problem;
- 3.0 Trash Management Areas and Control Measures;
- 4.0 Progress Assessment Strategies; and
- 5.0 References.

Section 2.0 is intended to provide a description of the extent and magnitude of the trash problem in the City of San José. Control measures that will be implemented by the City of San José as a result of this Long-Term Plan are described in Section 3.0. Section 4.0 describes the methods that will be used to assess progress toward trash reduction targets.

2.0 SCOPE OF THE TRASH PROBLEM

2.1 Permittee Characteristics

Incorporated in 1850, the City of San José is located in Santa Clara County and has a jurisdictional area of 101,440 acres subject to trash load generation rates. According to the 2010 Census, it has a population of 945,942, with a population density of 5,256.2 people per square mile and average household size of 3.09. Of the residents who call the City of San José home, 24.8% are under the age of 18, 9.5% are between 18 and 24, 31.1% are between 25 and 44, 24.5% are between 45 and 64, and 10.1% are 65 or older. The median household income was \$70,243 in 2010. The City of San José is home to Cisco Systems, IBM, eBay, Hitachi, Xilinx, Sanmina-SCI, and Adobe Systems.

Land uses within the City of San José depicted in ABAG (2005) are provided in Table 2. The City of San José is primarily residential, with significantly smaller percentages of industrial and commercial land uses. The City's size, variety of land uses, and income levels magnify the scope of work required to plan and successfully deploy trash control measures that meet the varying needs of each community.

The City also has additional factors that complicate trash abatement. San José is crisscrossed by multiple state-owned freeways that represent a source of windblown litter and a challenge when the City does not own property subject to trash accumulation. Adding another challenge is the homeless population throughout San José and Santa Clara County. These individuals often create encampments near or on creeks and represent a direct source of litter as well as large debris into local waterways. In fact, San José and Santa Clara County have the nation's fifth highest homeless population at 7,631 individuals, following New York City, Los Angeles, Seattle, and San Diego.

Table 2. Percentages of the City of San José's jurisdictional area¹ within land use classes identified by ABAG (2005)

Land Use Category	Jurisdictional Area (Acres)	% of Jurisdictional Area
Commercial and Services	4,282	4.2%
Industrial	6,995	6.9%
Residential	48,088	47.4%
Retail	3,493	3.4%
K-12 Schools	3,576	3.5%
Urban Parks	2,544	2.5%
Other	32,462	32.0%

¹ A Permittee's jurisdictional area is defined as the urban land area within a Permittee's boundary that is not subject to stormwater NPDES Permit requirements for traditional and non-traditional small MS4s (i.e. Phase II MS4s) or the California Department of Transportation, or owned and maintained by the State of California, the U.S. federal government, or other municipal agency or special district (e.g., flood control district).

2.2 Trash Sources and Pathways

Trash in San Francisco Bay Area creeks and shorelines originates from a variety of sources and is transported to receiving waters by a number of pathways (Figure 3). Of the four source categories, pedestrian litter includes trash sources from high traffic areas near businesses and schools, transitional areas where food/drinks are not permitted (e.g., bus stops), and from public or private special events with high volumes of people. Trash from vehicles occurs due to littering from automobiles and uncovered loads. Inadequate waste container management includes sources such as overflowing or uncovered containers and dumpsters as well as the dispersion of household and business-related trash and recycling materials before, during, and after collection. On-land illegal dumping of trash is the final source category.

Trash is transported to receiving waters through three main pathways: 1) Stormwater Conveyances, 2) Wind, and 3) Direct Dumping. Stormwater or urban runoff conveyance systems (e.g., MS4s) consist of curbs/gutters and pipes and channels that discharge to urban creeks and the San Francisco Bay shorelines. Wind can also blow trash directly into creeks or the Bay. Lastly, trash in receiving waters can also originate from direct dumping into urban creeks and shorelines.

This Long-Term Plan and associated trash control measures described in Section 3.0 are focused on reducing trash from one of the transport pathways illustrated in Figure 3 – **stormwater conveyances**. Specifically, the Long-Term Plan is focused on reducing the impacts of discharges from MS4s to San Francisco Area receiving waters and the protection of associated beneficial uses.

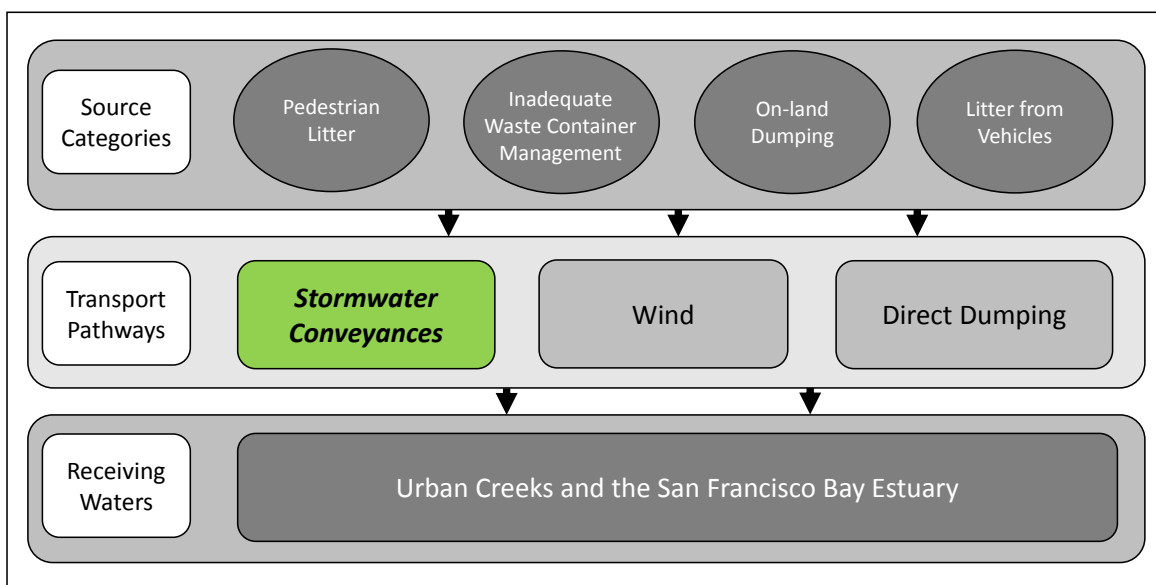


Figure 3. Trash sources categories and transport pathways to urban creeks

In addition to working to reduce trash conveyed by the stormwater system, the City works to reduce trash in local waterways that results from direct dumping. Under a Memorandum of Agreement with the Santa Clara Valley Water District (District), the City and the District work to clean homeless encampments and large trash accumulations or trash rafts within local creeks. The City and the District also collaborate by providing matching funding for San José Park

Ranger patrols; rangers patrol waterways to reduce illegal encampment activity and supervise volunteer creek cleanup activity along City trails and waterways.

The City of San José also has an innovative grant project that seeks to address direct dumping sources. Clean Creeks, Healthy Communities is an integrated, multi-disciplinary four year project aimed at preventing trash pollution in Coyote Creek that results from littering, illegal dumping, and homeless encampments. The goals of this project are to engage the community to clean Coyote Creek and its corridor; deter trash generating behaviors through passive and active monitoring; and promote greater engagement by the community with their local creek by working to increase the number of residents engaged in creek stewardship activities. The project includes actions to abate illegal dumping within the project area and reduce the effects of homelessness in our creeks by transitioning individuals to permanent housing through the involvement of Downtown Streets Team, an organization that rewards homeless volunteers that work on beautification projects with vouchers and additional assistance. Project staff monitors known dumpsites and documents and removes any dumped materials. In 2012, project staff began to search dumped materials for identifying information to provide to Code Enforcement who then sends a warning letter to the identified individual. The Clean Creeks Healthy Communities project also includes regular neighborhood volunteer cleanups. As part of the City's Place-Based Neighborhoods program the City initiated a contract with Downtown Streets Team in 2012 to have their volunteers clean up litter and dumping in three neighborhoods with known blight issues as part of an effort to create clean, safe, and engaged neighborhoods.

Volunteer creek cleanups are conducted twice per year in connection with California Coastal Cleanup Day and National River Cleanup Day. The City hosts clean-up sites in San José for both events. Since the effective date of the MRP these events have removed an aggregate total of 138 tons from local waterways.

2.3 Trash Generating Areas

2.3.1 Generation Categories and Designation of Areas

The process and methods used to identify the level of trash generation within the City of San José are described in this section and illustrated in Figure 4.

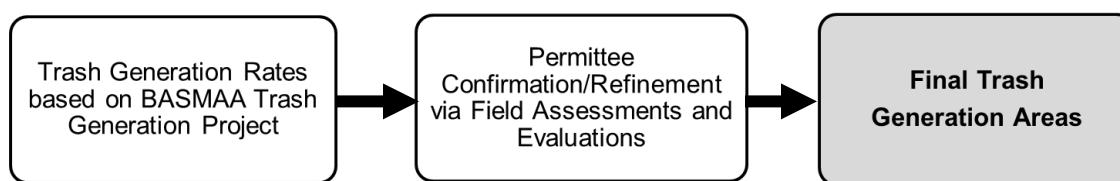


Figure 4. Trash sources categories and transport pathways to urban creeks

As a first step, trash generation rates developed through *the BASMAA Trash Generation Rates Project* were applied to parcels within the City of San José based on current land uses and 2010 household median incomes. A Draft Trash Generation Map was created as a result of this application. The draft map served as a starting point for the City of San José to identify trash generating levels. Levels of trash generation are depicted on the map using four trash

generation rate (gallons/acre/year) categories that are symbolized by four different colors illustrated in Table 3.

Table 3. Trash generation categories and associated generation rates (gallons/acre/year)

Category	Very High	High	Medium	Low
Generation Rate (gallons/acre/year)	> 50	10-50	5-10	< 5

The City of San José then reviewed and refined the draft trash generation map to ensure that trash generation categories were correctly assigned to parcels or groups of parcels. The City of San José staff refined maps using the following process:

1. Based upon City staff knowledge of trash generation and problem areas within the City of San José, staff identified areas on the draft map that potentially had incorrect trash generation category designations.
2. Trash generation category designations initially assigned to areas identified in step #1 were then assessed and confirmed/refined by the City using the methods listed below.

a. On-Land Visual Assessments

To assist Permittees with developing their trash generation maps, BASMAA developed a *Draft On-land Visual Trash Assessment Protocol (Draft Protocol)*. The Draft Protocol entails walking a street segment and visually observing the level of trash present on the roadway, curb and gutter, sidewalk, and other areas adjacent to the street that could potentially contribute trash to the MS4. Based on the level of trash observed, each segment (i.e., assessment area) was placed into one of four on-land assessment condition categories that are summarized in Table 4. Using the Draft Protocol the City assessed a total of 24 areas to assist in conducting/refining trash generating area designations. Five additional areas are currently being assessed, and the City plans to conduct assessments on an ongoing basis as control measures for trash management areas are developed.

Table 4. Definitions of on-land trash assessment condition categories

On-land Assessment Condition Category	Summary Definition
A (Low)	Effectively no trash is observed in the assessment area.
B (Medium)	Predominantly free of trash except for a few pieces that are easily observed.
C (High)	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets.
D (Very High)	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of a lack of concern for litter in the area.

b. Querying Municipal Staff

Staff from the City's Environmental Services Department met with staff from the City's illegal dumping and Anti-Litter programs to verify if local knowledge aligned with trash generation information. So far these two data sources have aligned; however, the City plans to continue to consult internal partners as additional areas are assessed for control measure implementation.

The Parks Division of the City's Parks, Recreation, and Neighborhood Services Department now tracks trash collection activities and trash collection quantities. This information will be used to support the Environmental Services Department's trash generation information.

- Based on assessments conducted to confirm/refine trash generation category designations, the City created a final trash generation map that depicts the most current understanding of trash generation within the City of San José. The City documented this process by tracking the information collected through the assessments and subsequent refinements to the Draft Trash Generation Map. The City of San José's Final Trash Generation Maps are included as Figures 5 – 10.

2.3.2 Summary of Trash Generating Areas and Sources

Summary statistics for land use and trash generation categories generated through the mapping and assessment process are presented in Table 5.

Table 5. Percentage of jurisdictional area within the City of San José assigned to each trash generation category

Trash Generation Category	Commercial and Services	Industrial	Residential	Retail	K-12 Schools	Urban Parks	Other
Very High	0.0%	0.0%	1.8%	96.0%	2.2%	0.0%	0.0%
High	0.0%	0.0%	51.0%	49.0%	0.0%	0.0%	0.0%
Medium	17.0%	27.2%	30.2%	0.5%	14.7%	10.4%	0.0%
Low	0.2%	0.5%	53.4%	0.1%	0.0%	0.0%	45.8%

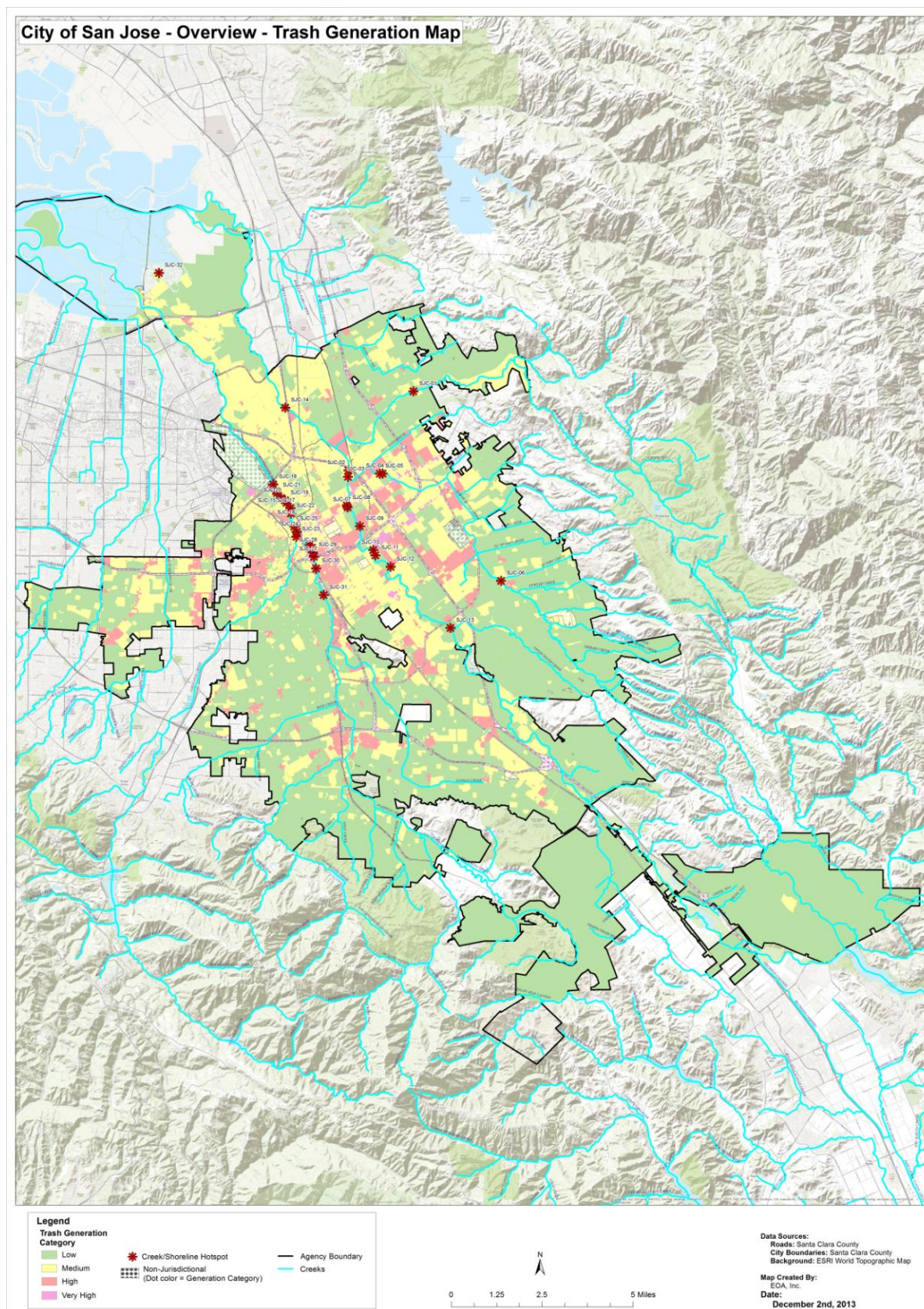


Figure 5. Overview Final Trash Generation Map for the City of San José

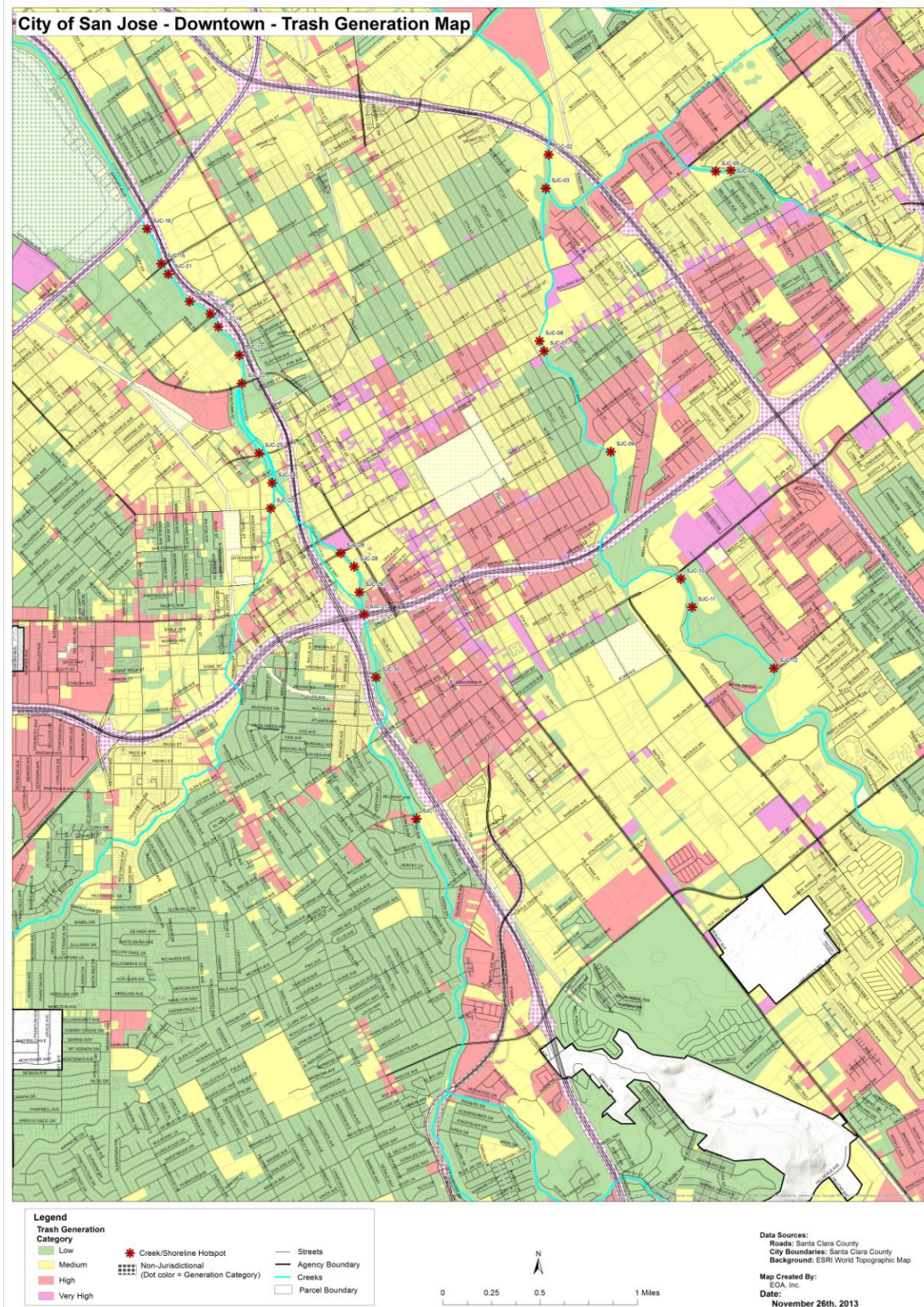


Figure 6. Final Trash Generation Map for the City of San José Downtown Area

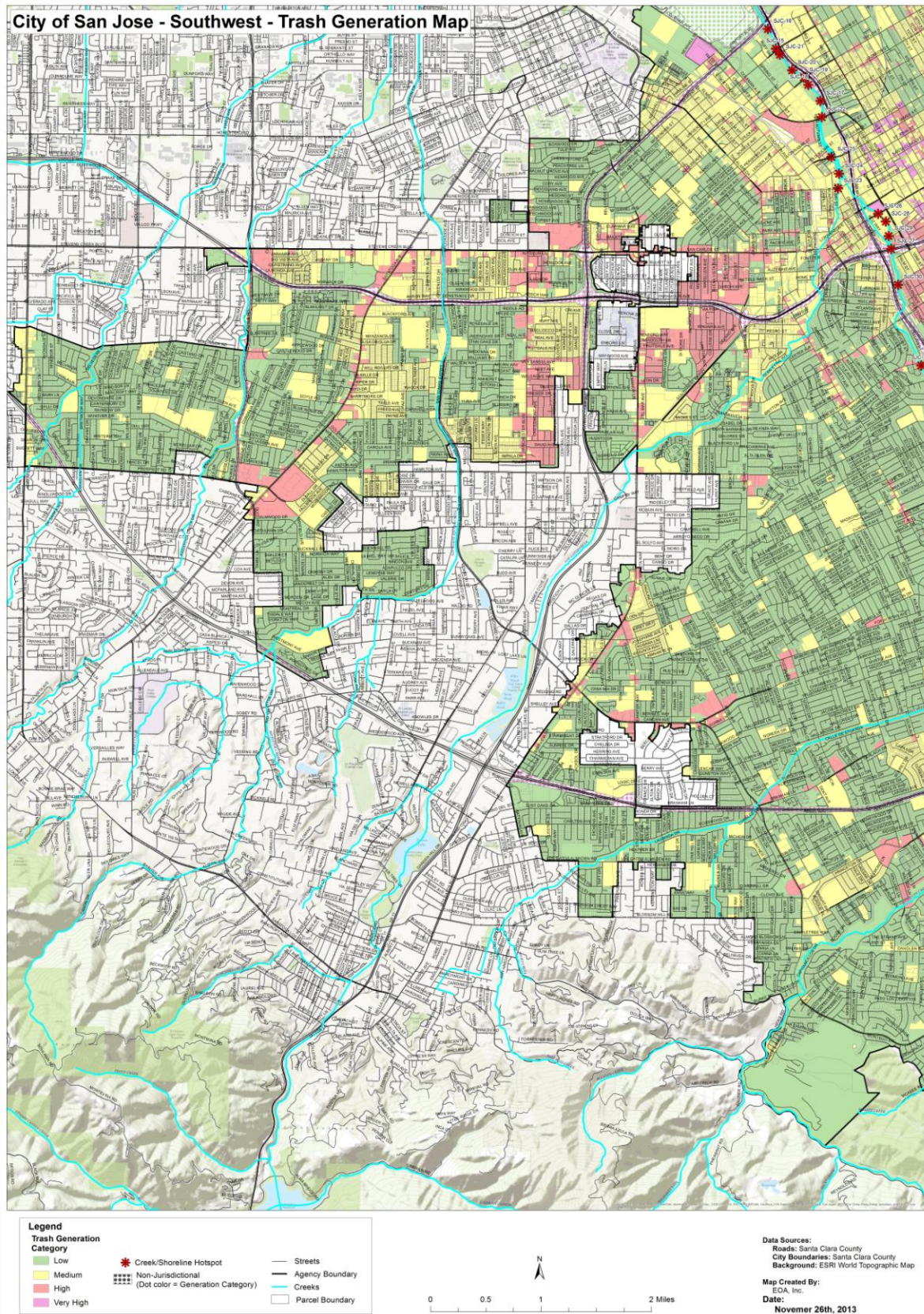


Figure 7. Final Trash Generation Map for the City of San José Southwest Quadrant

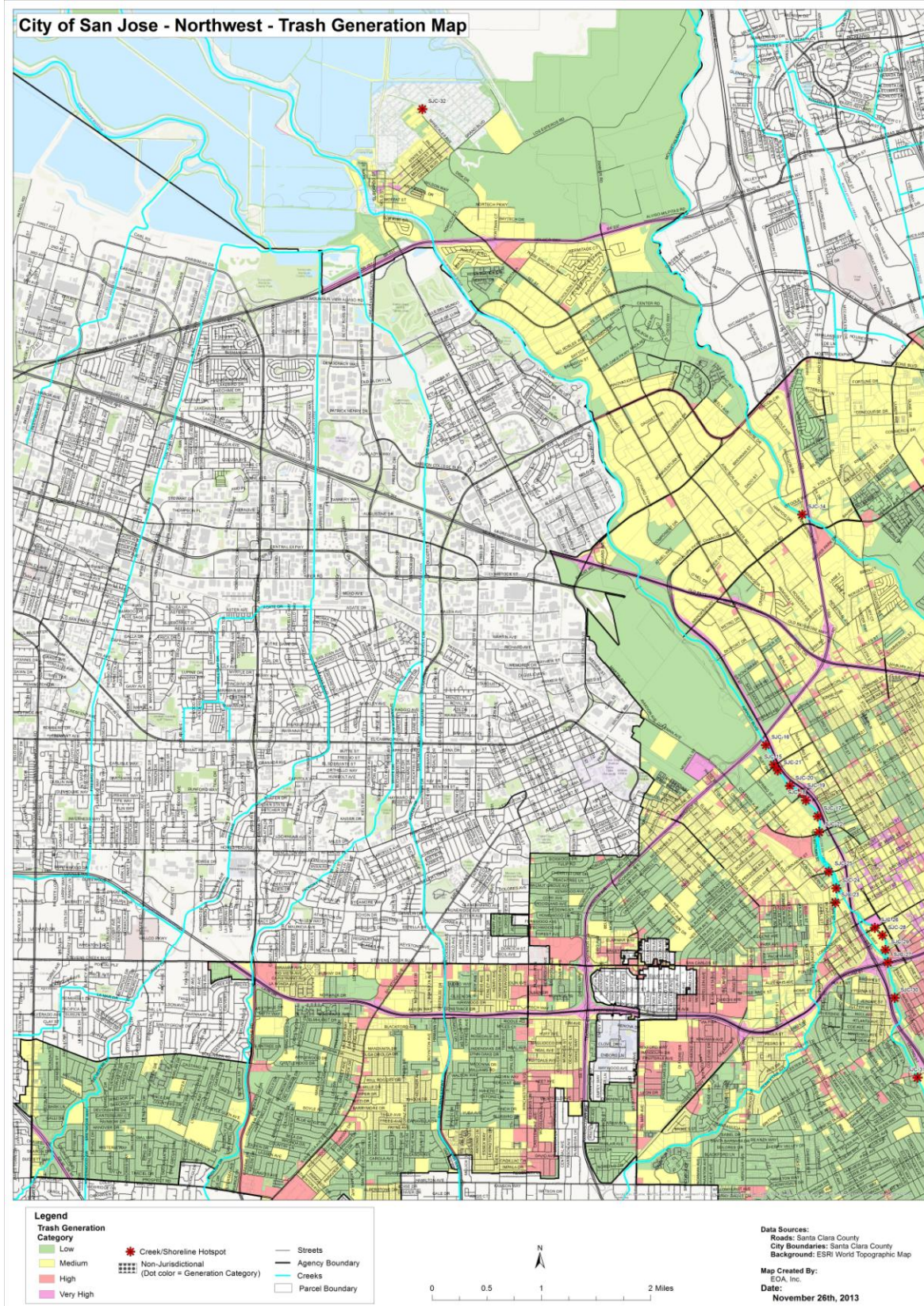


Figure 8. Final Trash Generation Map for the City of San José Northwest Quadrant

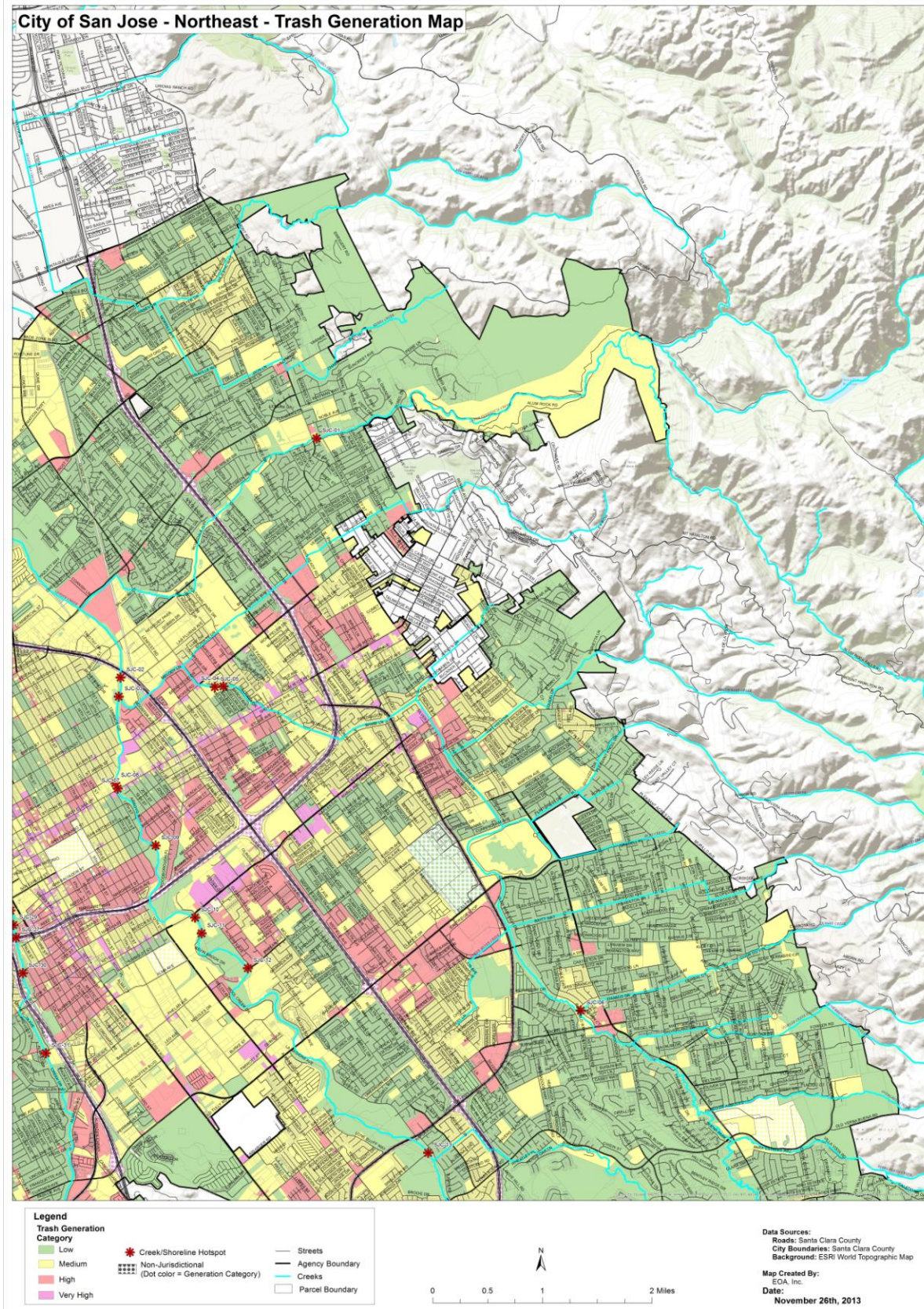


Figure 9. Final Trash Generation Map for the City of San José Northeast Quadrant

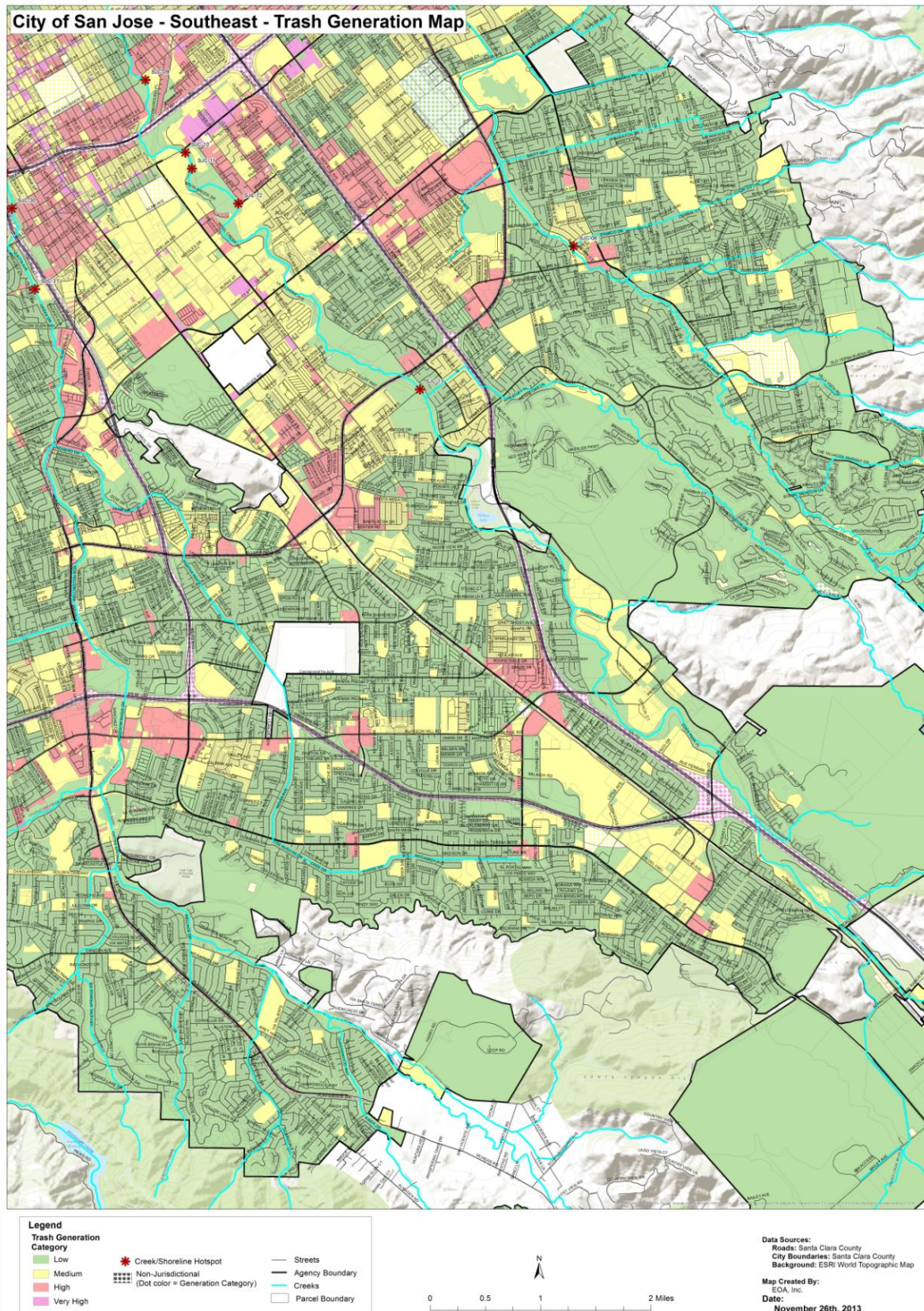


Figure 10. Final Trash Generation Map for the City of San José Southeast Quadrant

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3.0 TRASH MANAGEMENT AREAS AND CONTROL MEASURES

This section describes the control measures that the City of San José has or plans to implement to solve trash problems and achieve a target of 100% (i.e., full) trash reduction from the San José MS4 by July 1, 2022. The selection of control measures described in this section is based on the City of San José's current understanding of trash problems within its jurisdiction and effectiveness of control measures designed to reduce trash impacts associated with MS4 discharges. Because information on the effectiveness of some trash control measures is currently lacking, the City based its selection of control measures on available information, their experience in implementing trash controls and knowledge of trash problems, and costs of implementation. As additional knowledge is gained through the implementation of these control measures, the City may choose to refine their trash control strategy described in this section. If significant revisions or amendments are made, a revised Long-Term Plan will be submitted to the Water Board through the City of San José's annual reporting process.

3.1 Management Area Delineation and Prioritization

Trash Management Areas (TMAs) are intended to form the management units by which trash control measure implementation can be tracked and assessed for progress towards trash reduction targets. Consistent with the Long-Term Plan framework, the City of San José delineated and prioritized trash management areas (TMAs) based on the geographical distribution of trash generating areas, types of trash sources, and current or planned control measure locations. Once delineated, TMAs are prioritized for control measure implementation. The City of San José's primary management areas were selected based on the spatial distribution of trash generating areas and the location of specific existing or planned management actions within the City's jurisdiction. City staff used the following procedure to designate TMAs:

Trash Generation Maps – City of San José TMA delineation began with review of the BASMAA trash generation maps. The City identified areas of the maps that most obviously conflicted with existing knowledge of litter generation in select neighborhoods and then conducted field assessments to confirm the trash generation levels in these areas. Some of these areas will require additional on-site assessment due to the complexity of land uses and other variables that affect trash generation. The City delineated 14 initial TMAs (TMAs number 1-14) based on high and medium trash generation areas in which trash control measure pilots had previously been implemented or programmed to meet MRP requirements. These trash control measures include in-ground continuous deflection separator units, connector pipe screens, street sweeping with "No Parking" signage, community engagement, litter prevention, and enforcement.

Trash Generation Levels – An additional 33 secondary TMAs (lettered A – AG) were delineated based on trash generation levels (very high, high, and medium), natural boundaries, and classifications (e.g., land uses). The TMAs are generally contiguous geographical areas. In some instances, TMAs are classified by type, resulting in non-contiguous areas. Schools, retail business centers, parks, and proposed urban villages are examples of this classification-based trash management area scheme. The classification-based areas are located in pockets throughout the City. **More definitive trash control programming for these TMAs is pending more refined assessment to more clearly determine factors such as sources of litter and existing infrastructure that can be leveraged to achieve trash reduction goals.**

TMA Prioritization – TMAs are prioritized by assessing key factors including trash generation rate, visual impacts of on land and creek trash conditions, capacity of the City to effect improvements through the implementation of control measures, and contribution of trash control measures to the local community's quality of life.

Maps depicting the City's TMAs are included as Figures 11 - 15. All jurisdictional areas within the City are included within a TMA. The amount of jurisdictional land area and associated trash condition categories for each TMA are included in Table 6.

Table 6. Jurisdictional area and percentage of each Trash Management Area (TMA) comprised of trash generation categories

TMA	Jurisdictional Area (Acres)	Trash Generation Category			
		Very High	High	Medium	Low
1	187.7	10.2%	34.4%	41.8%	13.6%
1C	210.6	20.8%	1.9%	76.6%	0.7%
1E	11.8	34.6%	23.9%	41.5%	0.0%
1W	129.0	13.0%	0.7%	79.5%	6.8%
2	440.1	3.5%	53.3%	34.5%	8.7%
3	369.6	2.1%	48.1%	28.1%	21.6%
4	551.6	2.5%	40.6%	44.7%	12.1%
5	249.7	12.3%	17.2%	51.7%	18.8%
6	789.2	3.4%	29.0%	44.3%	23.3%
7	390.2	2.1%	54.9%	32.4%	10.6%
8A	62.4	0.0%	42.7%	42.5%	14.8%
8AR.1	91.7	47.7%	4.8%	46.3%	1.2%
8AR.2	50.5	42.0%	16.2%	37.9%	3.9%
8B.1	44.3	0.0%	85.0%	14.0%	1.0%
8B.2	10.5	0.0%	99.9%	0.0%	0.1%
8B.3	7.3	0.0%	82.5%	15.3%	2.2%
8B.4	21.5	0.0%	98.9%	1.1%	0.0%
8B.5	9.0	0.0%	99.8%	0.0%	0.2%
8B.6	4.2	0.0%	60.2%	39.8%	0.0%
8B.7	18.7	0.0%	99.8%	0.0%	0.2%
8CB.1	13.3	0.0%	100.0%	0.0%	0.0%
8CB.2	15.9	0.0%	100.0%	0.0%	0.0%
8CB.3	16.5	0.0%	100.0%	0.0%	0.0%
8CB.4	8.7	0.0%	80.7%	19.3%	0.0%
8DA	76.0	0.0%	0.0%	97.5%	2.5%
8E	160.0	0.0%	80.7%	19.1%	0.1%
8J	41.1	0.0%	25.4%	63.8%	10.8%
8LP	21.1	0.0%	41.7%	55.9%	2.3%
8SC	176.4	17.0%	26.9%	45.9%	10.2%
8SR	263.5	22.9%	46.9%	20.5%	9.7%
8ST.1	17.0	0.0%	100.0%	0.0%	0.0%
8ST.2	27.8	0.0%	100.0%	0.0%	0.0%
8ST.3	14.2	0.0%	95.9%	4.1%	0.0%
8ST.4	13.8	0.0%	100.0%	0.0%	0.0%
8ST.5	3.6	0.0%	0.0%	100.0%	0.0%

TMA	Jurisdictional Area (Acres)	Trash Generation Category			
		Very High	High	Medium	Low
8ST.6	4.3	0.0%	100.0%	0.0%	0.0%
8ST.7	6.2	0.0%	56.9%	43.1%	0.1%
8ST.8	5.5	0.0%	100.0%	0.0%	0.0%
8ST.9	47.5	0.0%	92.0%	8.0%	0.0%
8ST.10	11.8	0.0%	95.3%	4.7%	0.0%
8ST.11	8.6	0.0%	85.3%	0.0%	14.7%
8W	99.7	0.0%	54.3%	42.5%	3.1%
8WG.1	75.2	0.0%	48.1%	41.6%	10.3%
8WG.2	41.0	0.0%	43.4%	56.0%	0.6%
8WG.3	16.0	0.0%	63.0%	37.0%	0.0%
9	466.2	0.0%	18.6%	72.6%	8.8%
10	1085.5	2.3%	8.8%	58.5%	30.5%
11	535.8	0.0%	32.1%	45.4%	22.5%
12	287.3	0.0%	32.1%	66.0%	1.9%
13	347.2	0.0%	29.2%	26.7%	44.2%
14	423.4	0.0%	0.7%	71.3%	27.9%
A	6262.6	0.0%	0.2%	40.0%	59.8%
B	3234.8	0.4%	0.1%	97.5%	2.0%
C	334.1	0.0%	0.7%	70.1%	29.2%
D	69.5	0.0%	0.1%	99.9%	0.0%
E	330.7	0.0%	47.9%	15.6%	36.5%
F	149.6	0.0%	7.7%	88.7%	3.6%
G	2214.8	1.3%	9.8%	39.2%	49.6%
H	191.1	0.0%	2.7%	92.4%	4.9%
I	74.6	0.0%	2.9%	91.9%	5.2%
J	113.7	0.0%	0.2%	97.8%	2.0%
K	455.2	0.0%	29.5%	66.0%	4.6%
L	104.6	0.0%	0.0%	99.2%	0.8%
M	101.8	0.0%	41.3%	58.4%	0.3%
N	279.9	0.0%	0.0%	96.0%	4.0%
O	290.3	0.0%	0.3%	95.8%	4.0%
P	400.4	0.0%	0.0%	99.3%	0.7%
Q	544.2	0.0%	18.1%	68.2%	13.7%
R	161.1	38.3%	2.9%	54.2%	4.6%
S	220.0	0.0%	60.7%	39.2%	0.0%
T	2218.7	2.0%	16.4%	72.6%	9.0%
U	73.1	0.0%	0.0%	99.9%	0.1%

TMA	Jurisdictional Area (Acres)	Trash Generation Category			
		Very High	High	Medium	Low
V	149.7	0.0%	0.0%	99.8%	0.2%
W	1319.7	0.6%	4.6%	60.3%	34.5%
X	2485.4	0.0%	1.8%	93.2%	5.0%
Y	1090.9	0.0%	4.5%	93.1%	2.4%
Z	1172.6	0.0%	3.9%	89.4%	6.7%
AA	617.2	1.0%	14.7%	69.9%	14.4%
AB	625.4	0.0%	11.1%	57.9%	31.0%
AC	303.2	0.1%	53.1%	38.3%	8.4%
AD	422.8	0.0%	0.0%	75.5%	24.5%
AE	3743.8	0.2%	37.8%	38.1%	23.9%
AF	378.2	2.0%	0.0%	68.4%	29.6%
AG	63329.0	0.0%	0.1%	2.0%	97.9%

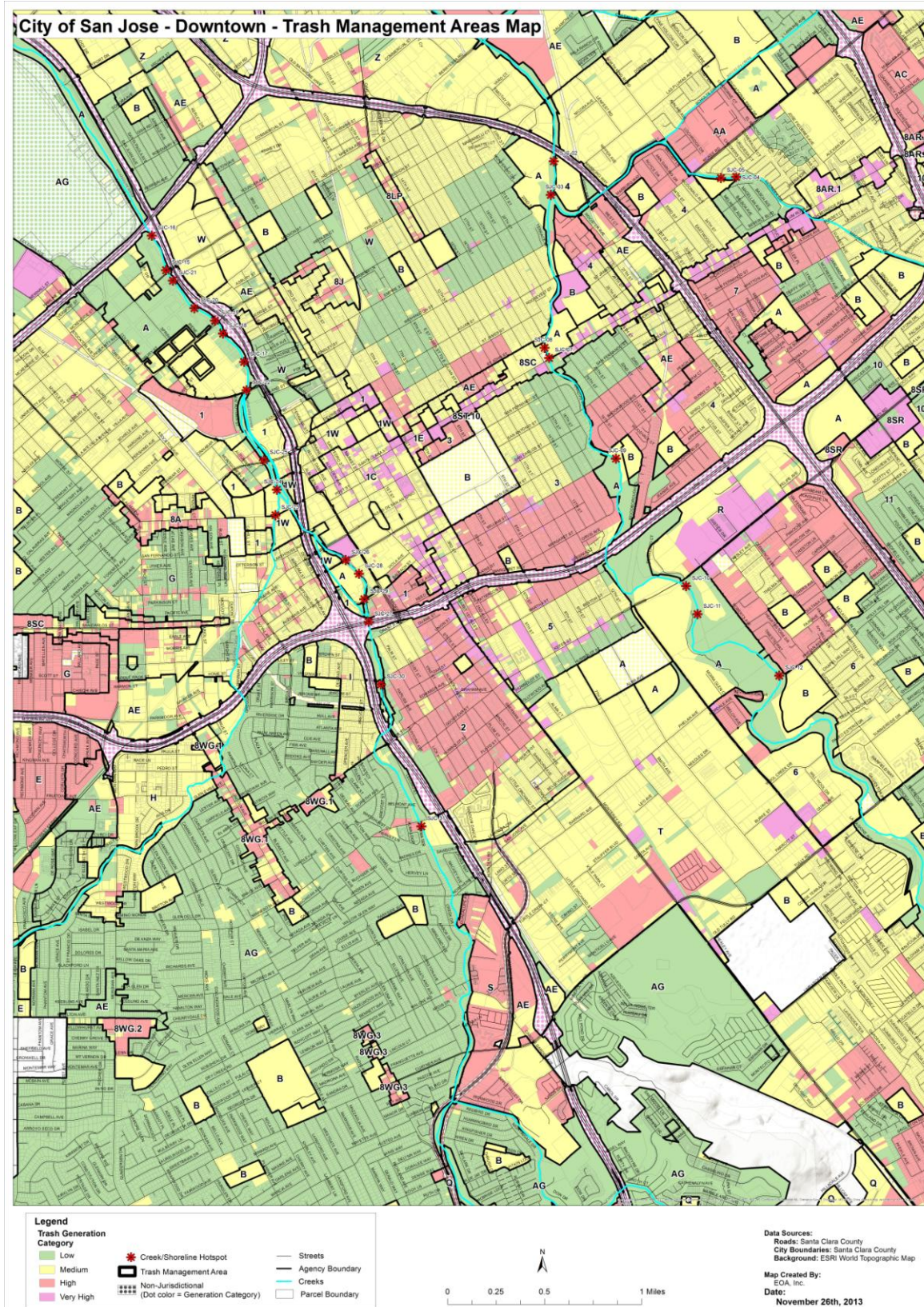


Figure 11. Trash Management Area Map for the City of San José Downtown Area

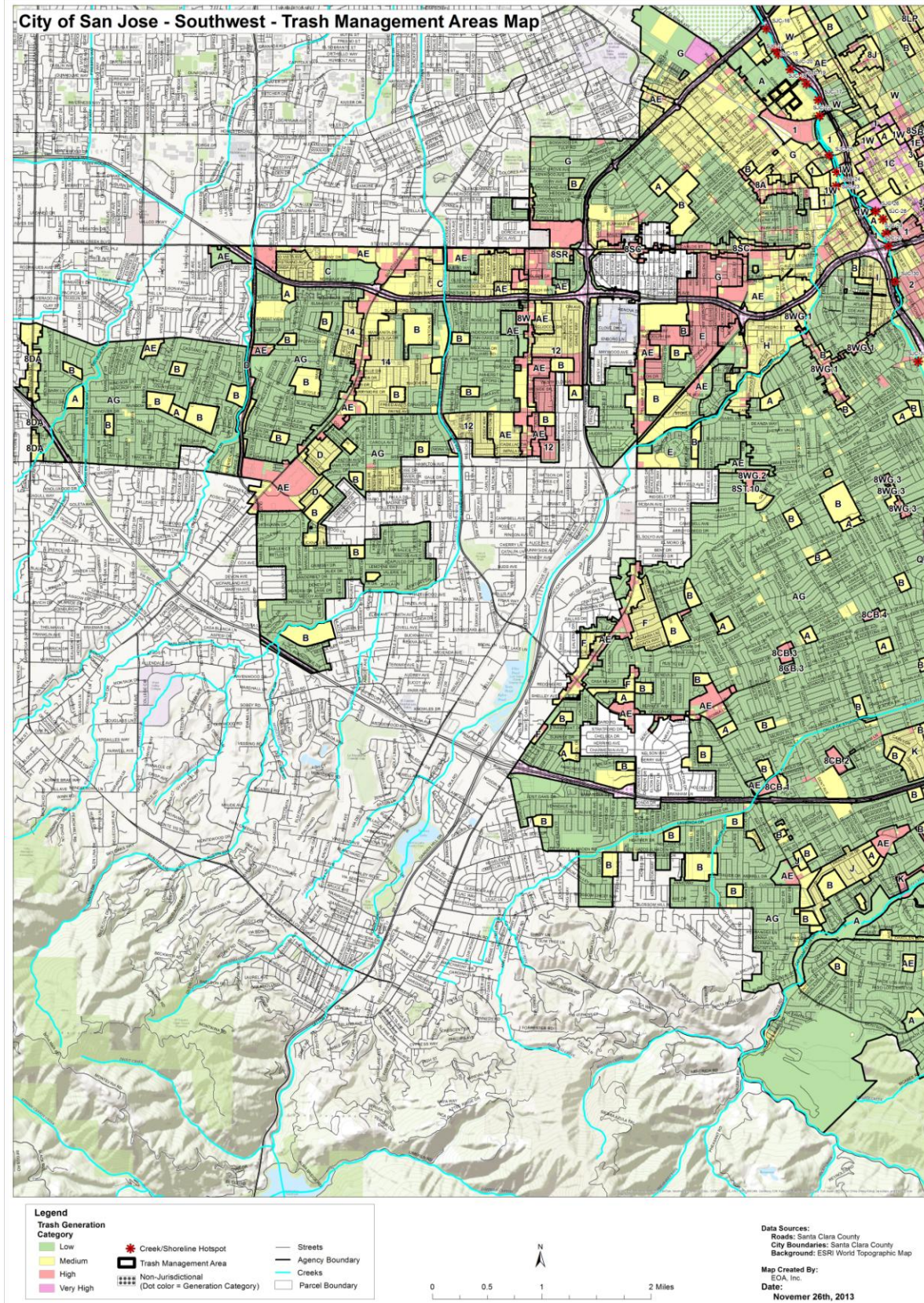


Figure 12. Trash Management Area Map for the City of San José Southwest Quadrant

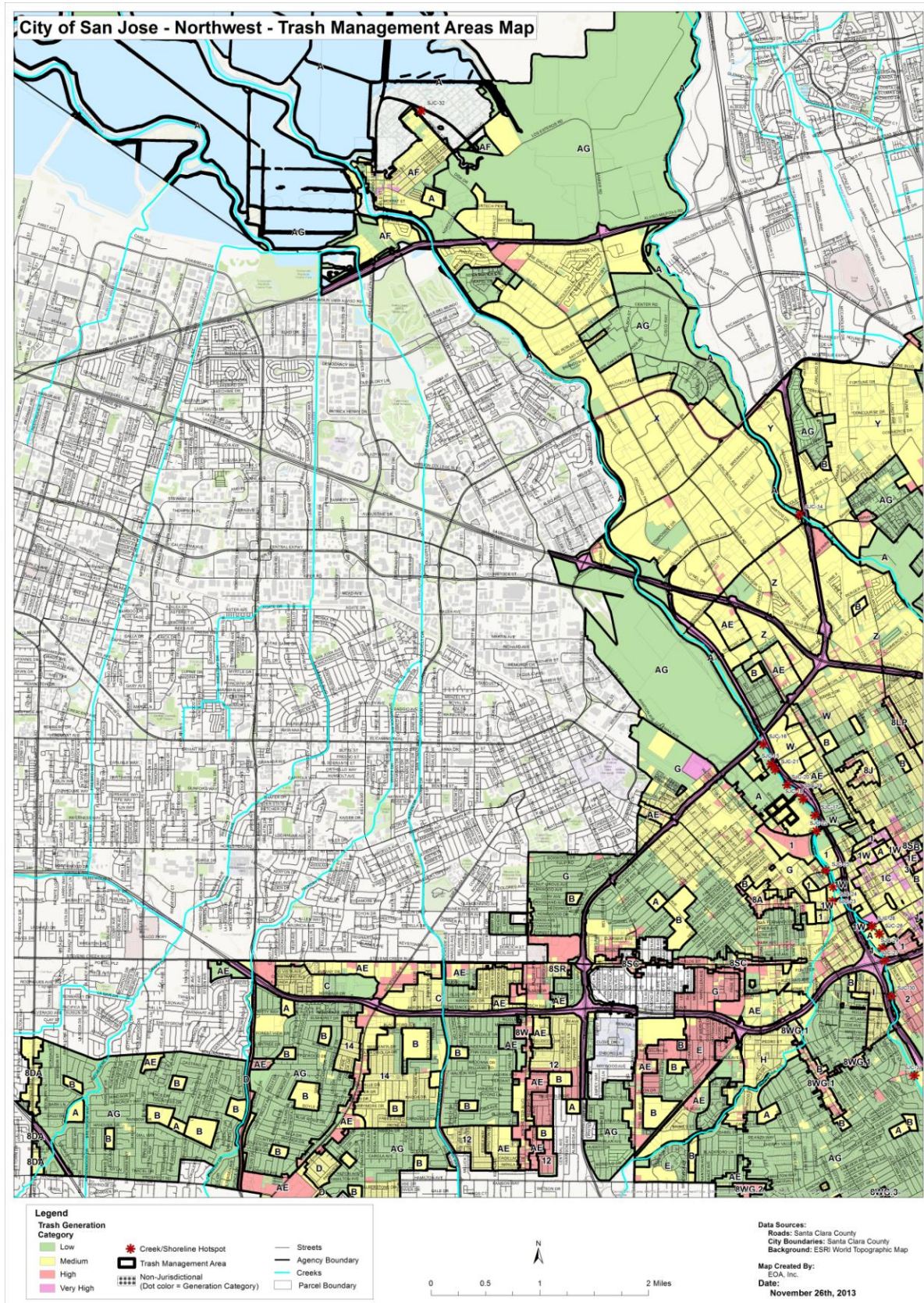


Figure 13. Trash Management Area Map for the City of San José Northwest Quadrant

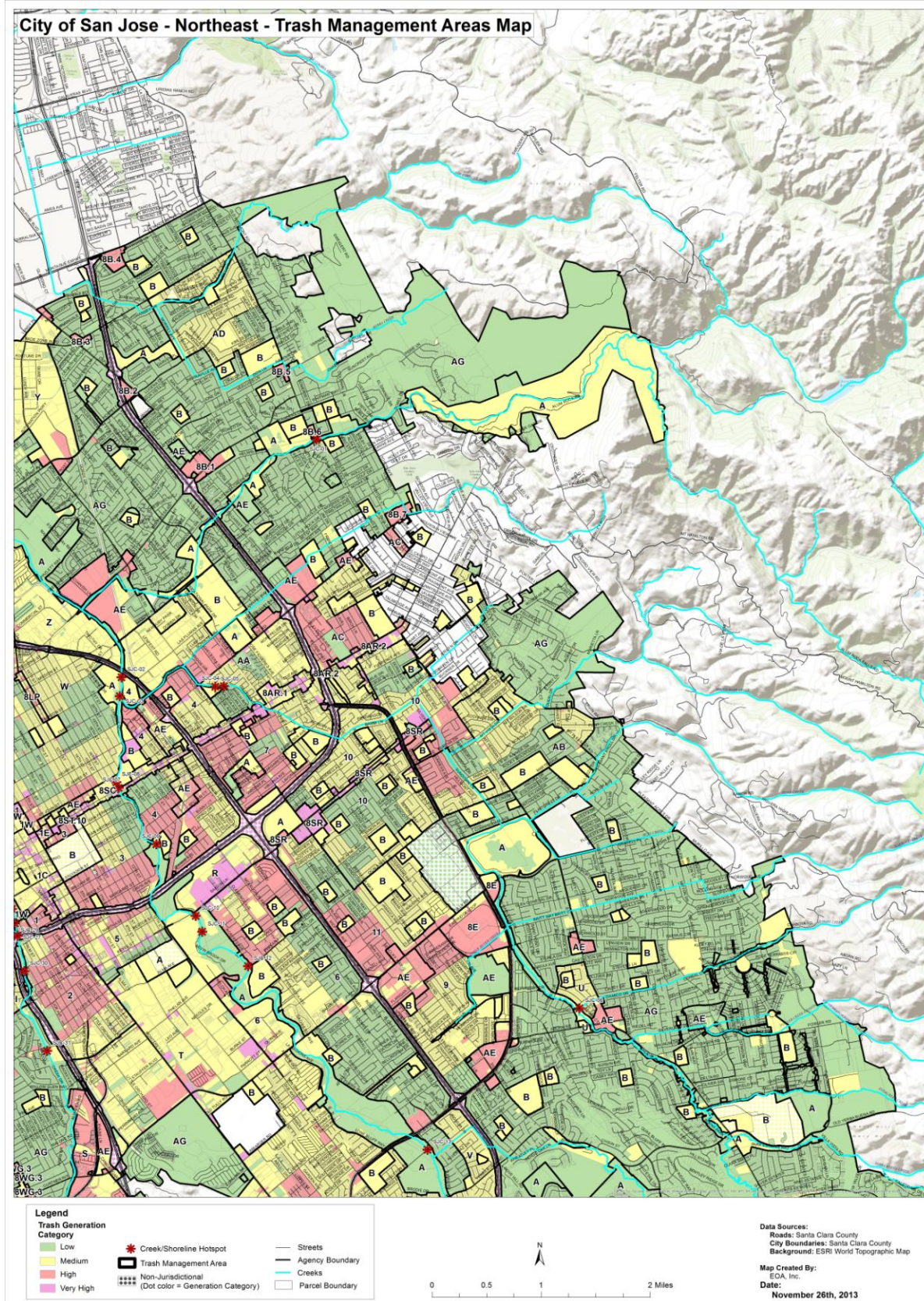


Figure 14. Trash Management Area Map for the City of San José Northeast Quadrant

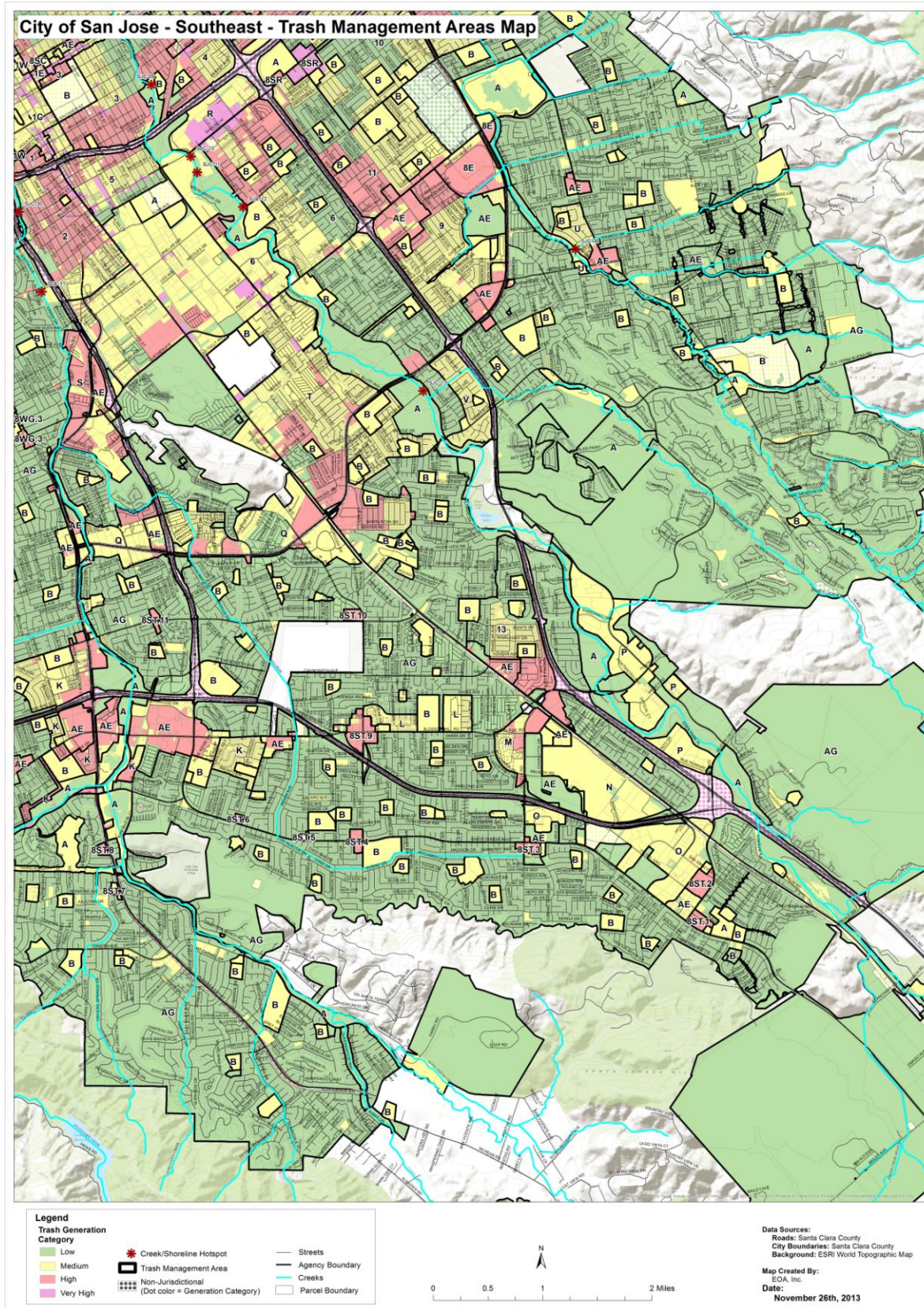


Figure 15. Trash Management Area Map for the City of San José Southeast Quadrant

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3.2 Current and Planned Trash Control Measures

The City of San José is employing a variety of trash control measures to achieve compliance with the reduction targets set forth in the MRP and has made significant progress with the implementation of its Short-Term Trash Load Reduction Plan. These measures include prevention such as product ban ordinances, interception such as full trash capture devices, and cleanup activities such as creek cleanups.

Full-Capture Treatment Devices

- Pre-MRP:
 - The City of San José installed 84 StormTek connector pipe screen (CPS) devices in 2007 - 2008. CPS installations are depicted in the City's Full-Capture Treatment Device location maps included following this section as Figures 16 – 21.
 - Installed 18 Continuous Deflection Separator (CDS) devices as part of private or municipal development projects. Data regarding these units is being further refined and is in the process of being incorporated into the City's full trash capture maps.
- 2009 – 2014:
 - Installed 50 additional CPS devices, bringing the City-wide total to 134 units. All together these screens represent a full trash treatment area of 134 acres. This acreage was calculated using a combination of delineated and estimated treatment areas. Delineated treatment areas exist for approximately half of the installed connector pipe screens. Because the delineated areas revealed an average treatment area of 1 acre for CPSs; this average treatment area was utilized for screens whose treatment area has not yet been determined. These preliminary estimates are subject to revision; any revisions will be reported via the City's annual reporting process. CPS installations are depicted in the City's Full-Capture Treatment Device location maps included following this section as Figures 16 – 21.
 - Installed nine CDS units. These units fully capture trash in the City's storm drain system for 1,272 acres of the City. Together the CPS and CDS units treat approximately 1,406 acres, 57 percent more area than the 895 acres required by the MRP in San José. The City of San José selected Contech CDS devices to meet the full trash capture requirement. These CDS installations are depicted in the City's Full-Capture Treatment Device location maps included following this section as Figures 16 – 21.
 - Installed 19 CDS devices as part of private or municipal development projects. Data regarding all units installed as part of development projects is being further refined and is in the process of being incorporated into the City's full trash capture maps.
 - The first two CDS units (Wool Creek [TMA 6] and Bulldog [TMA 4]) were cleaned out in FY 12-13 and one unit (7th Avenue [TMA T]) was cleaned in FY 13-14. Cleaning of the Bulldog unit was challenging due to water infiltration during the cleanout process. The City is currently developing an operation and maintenance verification program via the Santa Clara Valley Urban Runoff Pollution Prevention Program to ensure that devices are inspected and maintained at an appropriate level. Based on preliminary observations from these cleanout events, annual maintenance is anticipated to be sufficient to ensure proper operation; however, the City will completely clean all units and then monitor sediment and floatable levels to confirm this level of service is adequate at all locations. The CDS units appear to be functioning correctly and trash collected by the units includes expanded polystyrene (EPS), bottles, and toy balls. The maintenance report for the 7th Avenue unit cleanout was submitted to the SFEP by the Environmental Services Department in accordance with grant contract requirements for the Bay-Area

Wide Trash Capture Demonstration Project. Future cleaning records will be kept by the City's Department of Transportation.

- CPS maintenance occurs annually as part of the City's inlet cleaning program. Some inlets with CPSs had previously been cleaned out more frequently because they were part of the Bay Area Stormwater Management Agencies Association Regional Baseline Loading Study. With the conclusion of this study, the City is working to update the inlet cleaning and reporting procedure to include best practices that will improve efficiency while allowing adaptive field practices based on inlet conditions. The City plans to continue to inspect and clean inlets annually and determine if this is an appropriate maintenance frequency. Reported inlet conditions (i.e., inlets full of debris) will be used to modify the cleaning frequency if necessary. Inlet cleaning reports are kept by the City's Department of Transportation.
- Post-2014:
 - Planned installation of additional CDS units. Locations will be assessed and prioritized as trash control measures are refined for each Trash Management Area.

Street Sweeping

- Pre-MRP:
 - The City of San José street sweeping routes include 4 types of services: the residential street sweeping (RSS), arterial street sweeping (ACB), north business district street sweeping (NBD), and the central business district (CBD) street sweeping. Signage for parking restrictions due to street sweeping existed on 256 curb miles (CM) of RSS routes and 71 CM of ACB, NBD, and CBD routes prior to MRP adoption.
- 2009 – 2014:
 - No Parking signage for street sweeping and parking enforcement was expanded to include the neighborhoods of Story, Mammoth, Driftwood, Olinder, N 33rd, Allen, Balboa/Plata Arroyo, Virginia – Washington, Virginia – Spartan Keyes, and Heller. These additions added 44.4 CM to the RSS sweeper routes. This work was completed in FY 13-14.
 - Parking enforcement sign location data is not well documented for CBD and NBD routes. The City is currently in the process of verifying existing parking restriction signage on these routes.
- Post-2014:
 - Potential expansion of above program.

On-land Trash Cleanups

- Pre-MRP:
 - The City has an on-going Anti-Litter Program that recruits and supplies volunteers to remove litter from City streets and neighborhoods. The Anti-Litter program organizes volunteer groups for one day events and individuals to adopt litter hot spots or clean their neighborhood on an on-going basis. The program also conducts assessments using the Keep America Beautiful protocol on a yearly basis at litter hot spots throughout the City.
 - The Great American Litter Pick-Up is an annual volunteer event organized in coordination with the City's Anti-Litter Program and completed through volunteer engagement in each of the 10 City Council districts.
 - In addition to being able to adopt a litter hot spot or area within their neighborhood, volunteers may also participate in the City's Adopt-A-Park, Adopt-A-Trail, or Adopt-A-Street programs.

- 2009 – 2014:
 - Continuation of the City's Anti-Litter and "Adopt-A" programs.
 - In 2012, the Parks Division of the City's Parks, Recreation and Neighborhood Services Department (PRNS) implemented an activity data tracking system called Business Intelligence (BI). Through BI, PRNS now tracks trash collection activities and trash collection quantities. This information will be utilized to support the City's trash generation and collection information and to improve the effectiveness of park maintenance (e.g., litter cleanup).
 - In 2013, San José Park Rangers started patrolling waterways to reduce illegal encampment activity and issuing criminal citations to individuals for illegal activity that results in waterway degradation. Rangers and PRNS maintenance staff also supervise volunteer creek clean up activity along City trails and waterways.
 - In 2012, the Housing Department contracted with Downtown Streets Team to have their volunteers clean up litter and dumping in three neighborhoods with known blight issues. This effort is part of a Place-Based Neighborhoods program that works to create clean, safe, and engaged neighborhoods in three areas of the City. The Code Enforcement Division of the City participates in blight reduction efforts as part of this program.
- Post-2014:
 - Potential expansion of the Place-Based Neighborhoods program.

Partial-Capture Treatment Devices

- Pre-MRP:
 - The City of San José did not install any partial-capture treatment devices pre-MRP.
- 2009 – 2014:
 - The City will be conducting a pilot utilizing automatic retractable screens (ARS) in FY 13-14. The pilot would include approximately one hundred inlets in a neighborhood with high and medium trash loading that already has parking restrictions and enforcement in place for street sweeping.
- Post-2014:
 - Potential expansion of above program.

Anti-Littering and Illegal Dumping Enforcement Activities

- Pre-MRP:
 - The City's Anti-Litter Program, as described above under On-Land Trash Cleanups, has been active since before MRP adoption. In addition to this program the City's Department of Transportation responds to illegal dumping complaints on the public right of way.
- 2009 – 2014:
 - Continuation of the City's Anti-Litter and illegal dumping response programs.
 - Collaboration of the City and the Santa Clara Valley Water District to provide Ranger patrols of waterways for watershed protection and illegal encampment enforcement. Rangers issue criminal citations to individuals for illegal activity that results in waterway degradation.
- Post-2014:
 - Potential expansion of above programs.

Improved Trash Bins/Container Management

- Pre-MRP:

- The City supported the successful establishment of the Downtown San José Property Based Improvement District (PBID). The Downtown PBID, among its enhanced services, incorporates sidewalk sweeping, litter pickup, and maintenance of public area trash containers at least once per week in retail/wholesale and commercial areas.
- 2009 – 2014:
 - In 2012, the City initiated a new solid waste inspection program. The program tracking and educational materials are currently under development. The Inspectors have been conducting initial inspections in commercial areas within the City and alerting businesses to issues with the management of the debris bins and waste storage areas.
 - The City is planning to develop a targeted education and enforcement campaign to work with neighborhood business associations to prevent and clean up trash and litter in the business districts. Currently, the City is evaluating neighborhood business districts for a pilot program in two of the City's nine districts and anticipates starting work in the first business district in FY 13-14. The goal of this project is to have no litter remaining for more than 24 hours.
 - Coordination with business districts to identify locations in need of public litter can placement and services to reduce trash accumulation on streets.
- Post-2014:
 - Potential expansion of above programs.

Creek, Channel, Shoreline Cleanups

- Pre-MRP:
 - The City is a founding member of the Creek Connections Action Group (CCAG), a consortium of public agencies and non-profit organizations that organize the two largest annual volunteer creek/shoreline cleanups: California Coastal Cleanup Day and National River Cleanup Day. Staff participates in the CCAG Planning Committee and supports the group with materials, labor, promotion of events, and participation as site coordinators on California Coastal Cleanup Day and National River Cleanup Day events.
- 2009 – 2014:
 - Continued participation in National River Cleanup Day and Coastal Cleanup Day.
 - City of San José Park Maintenance Districts support additional creek cleanup activity to enhance Park Ranger enforcement and watershed protection efforts.
 - Completed annual cleanup of all 32 hot spots to a level of “no visible impact” from trash, removing a 3 year aggregate total of 491 cubic yards.
- Post-2014:
 - Continuation of above programs.

Single-Use Carryout Bag Policies

- Pre-MRP:
 - Stakeholder outreach related to a Single-Use Carryout Bag Ban started in 2008.
- 2009 – 2014:
 - In January 2012, the City implemented a Single-Use Carryout Bag Ban Ordinance, becoming the largest city in the state to ban plastic carryout bags. The ordinance also enacts a fee for paper bags to encourage consumers to bring their own bag.
- Post-2014:
 - Continued evaluation of ordinance effectiveness and consideration of ordinance amendments as necessary.

Polystyrene Foam Food Service Ware Policies

- Pre-MRP:
 - No control measures were implemented prior to the MRP.
- 2009 – 2014:
 - Effective May 1, 2010, the City of San José adopted a policy prohibiting food vendors from distributing polystyrene foam food and beverage ware at large events on Permittee-owned property.
 - On April 24, 2012, City Council approved an amendment to the City's Environmentally Preferable Procurement Policy, or EP3, (http://www.sanjoseca.gov/clerk/cp_manual/CPM_4_6.pdf) to provide guidelines for a prohibition on the purchase of EPS foam food ware. The new policy incorporates prohibitions on purchases of EPS foam food ware into the City's established EP3 policy. The new EP3 policy language covers all City facilities and the use of City funds regarding the purchase of food service ware containers and take-out food packaged in containers made from EPS such as cups, plates, and bowls.
 - On February 26, 2013, City Council directed staff to proceed with reviewing the potential impacts of banning EPS foam food packaging citywide and to work on a county-wide environmental review of phasing out EPS. The CEQA review was completed in fall 2013.
 - Bilingual outreach on the proposed EPS phase out continued with a series of Regional Food Ware Vendor Open Houses. These open houses, presented in collaboration with Morgan Hill, Sunnyvale, Los Altos, Cupertino, and Mountain View, presented an opportunity for food service establishments to explore alternative materials, get pricing information, and speak to municipal staff regarding potential ordinances. Two of these open houses took place in FY 12-13 and a third occurred on August 6, 2013 in Sunnyvale. The San José event, which took place in the morning and afternoon of June 5, 2013, was attended by 13 representatives from 11 food service establishments. Eighteen food ware distributors, brokers, or manufacturers were represented through the event. In addition to these purchasing resources, the manager of a local restaurant that utilizes alternatives was available in the afternoon session to speak to restaurants and answer questions regarding their use of alternative products.
 - In addition to a regional Open House, the City of San José has also held Information Sessions relating to the expanded polystyrene ordinance. These events took place on July 15, 2013 and November 4, 2013. Twenty-five members of the public attended these two events.
 - In September 2013, Council approved an ordinance to phase-out the use of polystyrene food ware in restaurants. San José is the largest city to adopt such an ordinance to date. The ordinance will be effective January 1, 2014 for multi-state restaurants.
- Post-2014:
 - The polystyrene phase-out ordinance will be effective January 1, 2015 for all remaining food service vendors in San José.
 - Ordinance evaluation and amendments as necessary.

Public Education and Outreach Programs

- Pre-MRP:
 - The City participates in the countywide Watershed Watch Campaign and the ZunZun youth education program. The Watershed Watch Campaign conducts media advertising that includes anti-litter messages. Anti-litter advertisements for television, print, transit, and radio have been developed and are used each year and will continue in the future. A

telephone survey is conducted every five years to measure the effectiveness of outreach and increase in awareness about litter and stormwater related messaging. As part of SCVURPPP, the City funds up to 50 ZunZun musical assemblies at elementary schools in the Santa Clara Valley each year. These bilingual musical assemblies educate elementary school students and their teachers on watersheds and urban runoff pollution prevention, including litter. ZunZun performances use physical comedy, audience participation, and musical instruments to educate teachers and children. Handouts, including teacher and student activity sheets, are distributed following the assembly.

- Regionally, the Santa Clara County Zero Litter Initiative is working with haulers to reduce litter from garbage collection and transportation.
- In addition to these regional efforts, the City leads local efforts such as the Creeks Come to Class Program and funds programs in partnership with the Don Edwards Environmental Education Center. In addition to these enhanced activities, the City also attends many public community outreach events where the anti-littering message is promoted.
- 2009 – 2014:
 - In FY 11-12, BASMAA began implementing the “Be the Street” anti-litter Youth Outreach Campaign. Be the Street takes a Community Based Social Marketing approach to encourage youth to keep their community clean. The intent of the campaign is to make “no-littering” the norm among the target audience (youth between the ages of 14 and 24). The campaign is using online social marketing tools to conduct outreach.
 - The City’s Clean Creeks, Healthy Communities (CCHC) program includes specific outreach and community surveys along a targeted length of Coyote Creek impacted by trash and illegal dumping. CCHC aims to reduce trash through addressing homelessness, community engagement, and illegal dumping prevention. The project represents a partnership of the City, EPA, Santa Clara Valley Water District, San José State University, and non-governmental agencies over a four year period. To date CCHC has participated in or organized 42 outreach events and reached an estimated 1,274 residents and students with their watershed protection and anti-litter messages. Surveys will offer specific metrics by which to measure program effectiveness. The first resident baseline survey was conducted in October 2011 and revealed 58% of residents are aware that their personal conduct can result in litter in Coyote Creek. The next survey, conducted in fall 2013, showed an increase in the number of residents aware that their actions can impact Coyote Creek.
 - The City and the San José Earthquakes will partner on a multi-faceted media campaign focused on several of the City’s environmental programs including zero waste and litter reduction.
- Post-2014:
 - Continuation of above programs.

Community Engagement – Anti-Gang & Blight Interdepartmental Coordination

- Pre-MRP:
 - No control measures were implemented prior to the MRP.
- 2009 – 2014:
 - Citywide coordination among the Environmental Services Department; Parks, Recreation and Neighborhood Services; Police; and Planning, Building, and Code Enforcement to leverage anti-gang resources to control blight and litter in gang hotspots throughout the City through community engagement and enforcement. This program is currently under development and planned to be initially implemented in four areas throughout San José.

- Post-2014:
 - Potential expansion of above programs, contingent on future funding.

Community Engagement – Schools

- Pre-MRP:
 - No control measures were implemented prior to the MRP.
- 2009 – 2014:
 - Develop a comprehensive anti-litter education and prevention program for all K-12 schools that will be integrated into a broader environmental education curriculum to be implemented in coordination with the Environmental Services Department, other City programs, and outside stakeholders.
 - Participation in the Schools/City Collaborative, a meeting of school Superintendents in Santa Clara County, to explore and develop trash reduction programs and projects.
- Post-2014:
 - A schools conference is planned for the first quarter of 2015. The conference includes presentations and resources to green schools and will include trash reduction information.
 - Potential expansion of above programs.

Urban Village Development

- Pre-MRP:
 - No control measures were implemented prior to the MRP.
- 2009 – 2014:
 - Coordinate with Planning, Building, and Code Enforcement to ensure that trash control measures are implemented in future urban village development.
- Post-2014:
 - Continuation of above program.
 - Determine feasibility of specific General Plan updates or development permit requirements that address litter reduction.

Bay Area Trash Summit

- 2009 – 2014:
 - In November 2013, the City hosted a Bay Area Trash Summit to create a comprehensive dialogue related to trash control measures and discuss innovative future solutions in a collaborative environment. The City is identifying attendee organizations interested in working on specific issues such as expansion of the bottle bill, no smoking ordinances and outreach, and data gathering and sharing.

Post-2014 Actions

For the Post-2014 timeframe, the City of San José requires an implementation process that allows the City to achieve the necessary progress given the scale of its trash problem. The implementation plan must take into account the diversity of the City's communities and the non-standardization of the storm sewer system. At the same time, the City must meet the time constraints of the MRP and work within the limitations of the City's resource base.

In order to make the most efficient use of the City's trash reduction resources, San José seeks to understand the effectiveness and operational efficacy of the full trash capture equivalent control measures on a more limited basis prior to significant investment in any broader citywide

implementation. To this end, the City proposes an implementation plan for trash reduction that will allow it to best understand how these proposed control measures work in the real world. Using this approach, the City will be able to implement its ambitious trash reduction programs in the most rational and cost-effective manner.

The City of San José's implementation plan for the Post-2014 actions has two steps: (1) Evaluate all new control measures being implemented in the 2009-2014 timeframe to determine effectiveness, appropriateness for implementation in other TMAs, and opportunities for continuous improvement; and (2) Assess TMAs for which control measures have yet to be definitively programmed and determine specific actions for each specific TMA. The City of San José proposes using the annual report process to update the Water Board on its progress in implementing Post-2014 actions. The City anticipates conducting pilots and assessing TMAs in the next two years and then proceeding to prioritization and implementation starting approximately in 2015.

The City of San José has thus far programmed trash reduction actions for one-fifth (7,780 acres) of the City's 31,118 acres of jurisdictional area that are included in its Trash Management Areas. While this 31,118 acres is an area that represents only about one third of the City's total jurisdictional area, it is an area greater than the total area of the City of San Francisco. The scale of the trash reduction program necessitates that the City prioritize its action in its 47 TMAs. In addition to this programming, multiple significant jurisdictional-wide actions have been or are planned to be implemented.

The City's prioritization process for Post-2014 actions is as follows:

1. Evaluate the severity of each TMA's trash burden based on visual assessments, local knowledge, and predominance of very high, high, and/or medium trash generation areas.
2. Examine each TMA which has yet to be definitively programmed with trash reduction actions and consider the efficacy of possible options. This includes evaluating full-capture or full-capture equivalency candidacy.
3. Assess the relative costs and benefits of implementation in each TMA.
4. Identify any opportunities to leverage the activities of other community service programs working in the TMA.
5. Estimate the amount of progress that the City can reasonably expect from that area.

The additional prioritization, analysis, and programming for the remaining 33 areas will be completed by the end of FY 15-16. The City will provide continual TMA updating of planning and implementation activity as part of the annual report process.

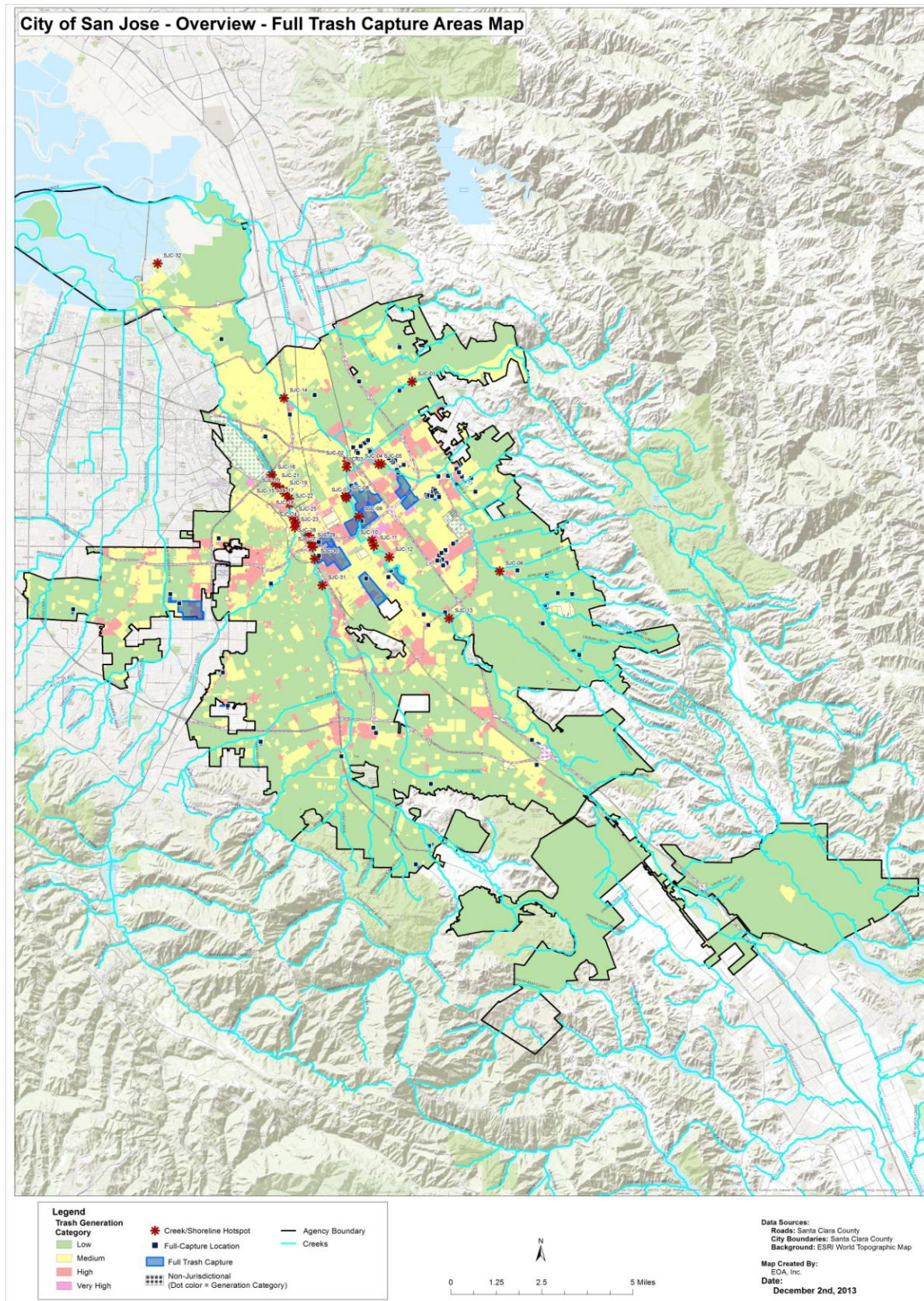


Figure 16. Trash Full-Capture Device Map for the City of San José

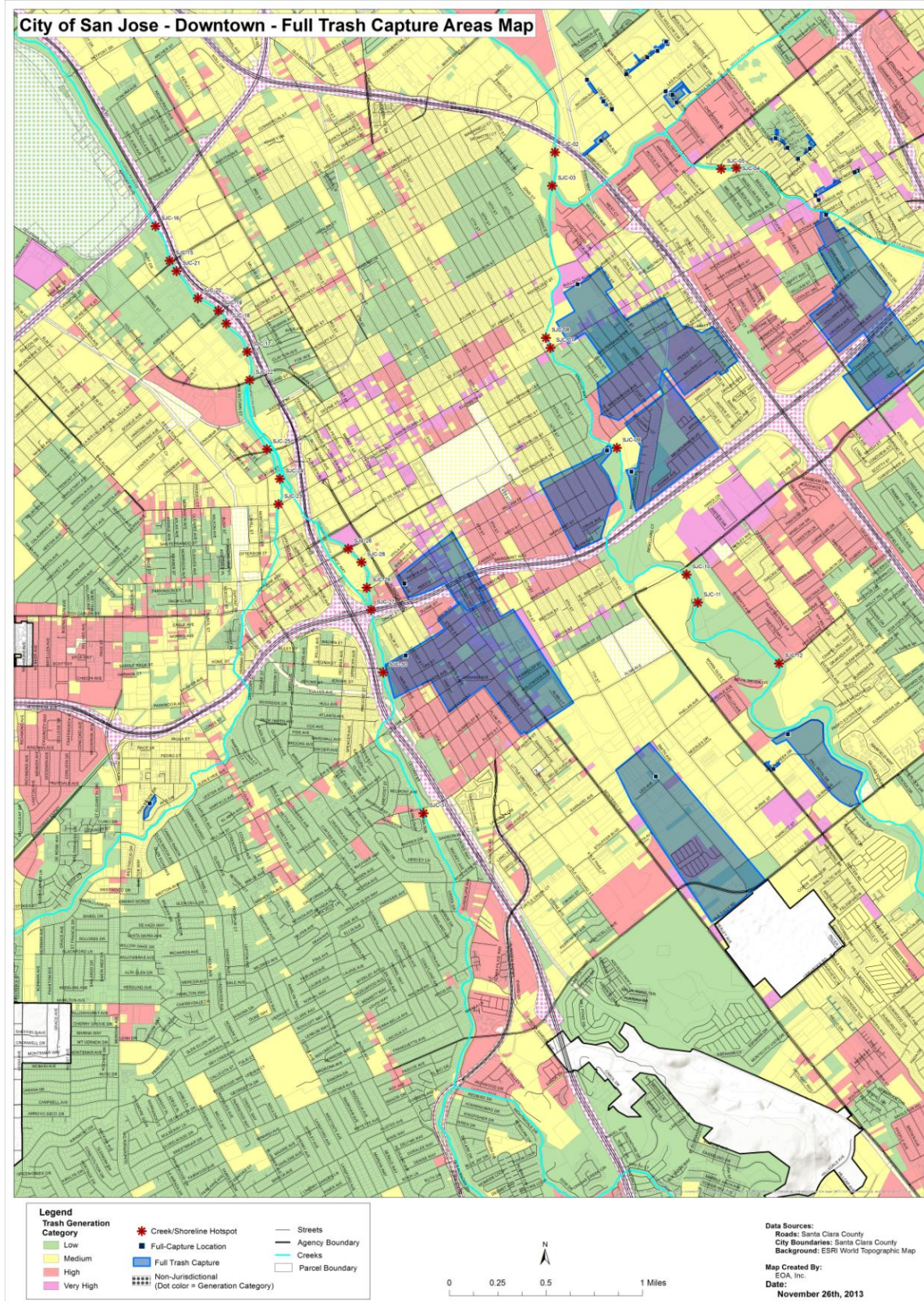


Figure 17. Trash Full-Capture Device Map for the City of San José Downtown Area

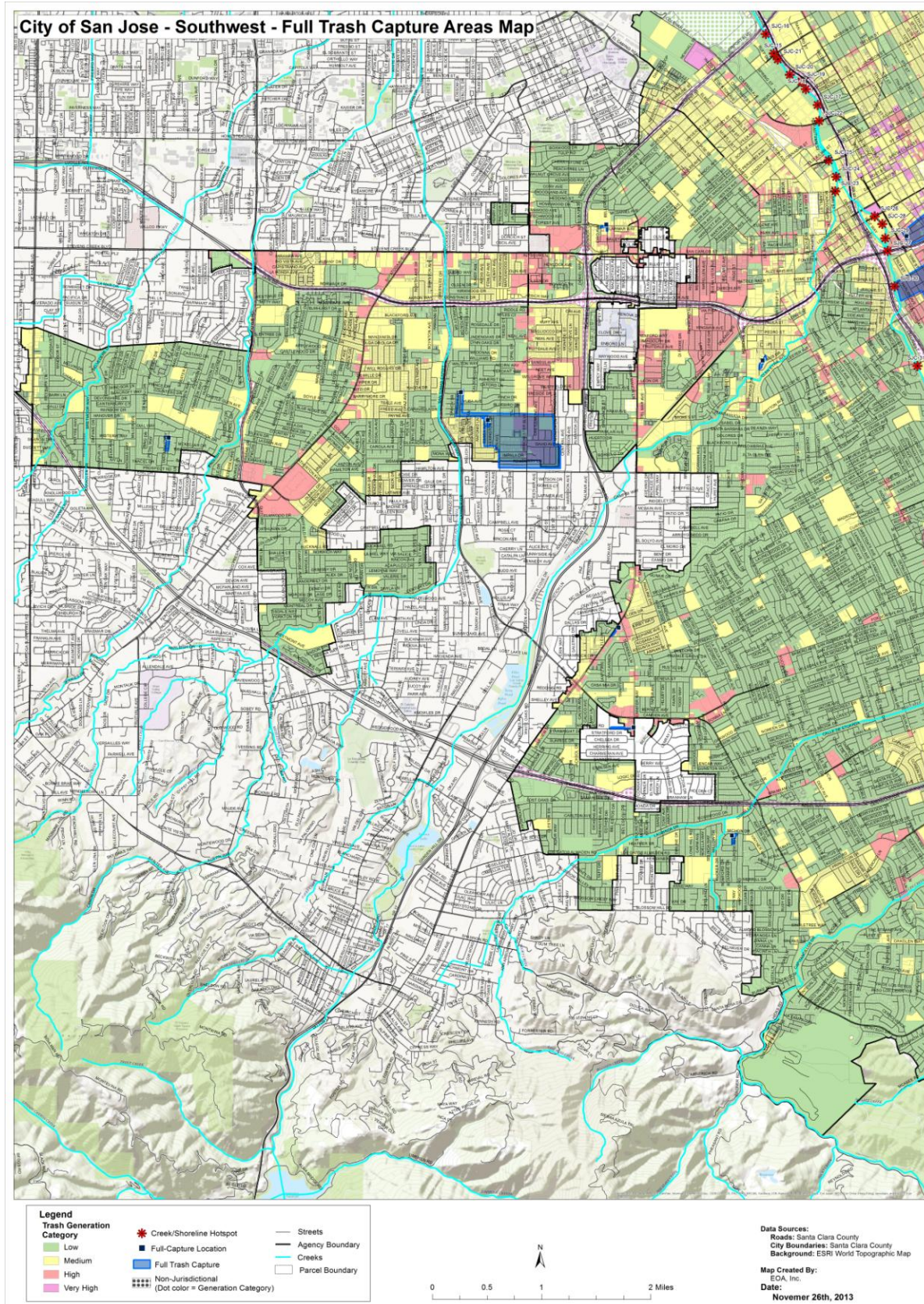


Figure 18. Trash Full-Capture Device Map for the City of San José Southwest Quadrant

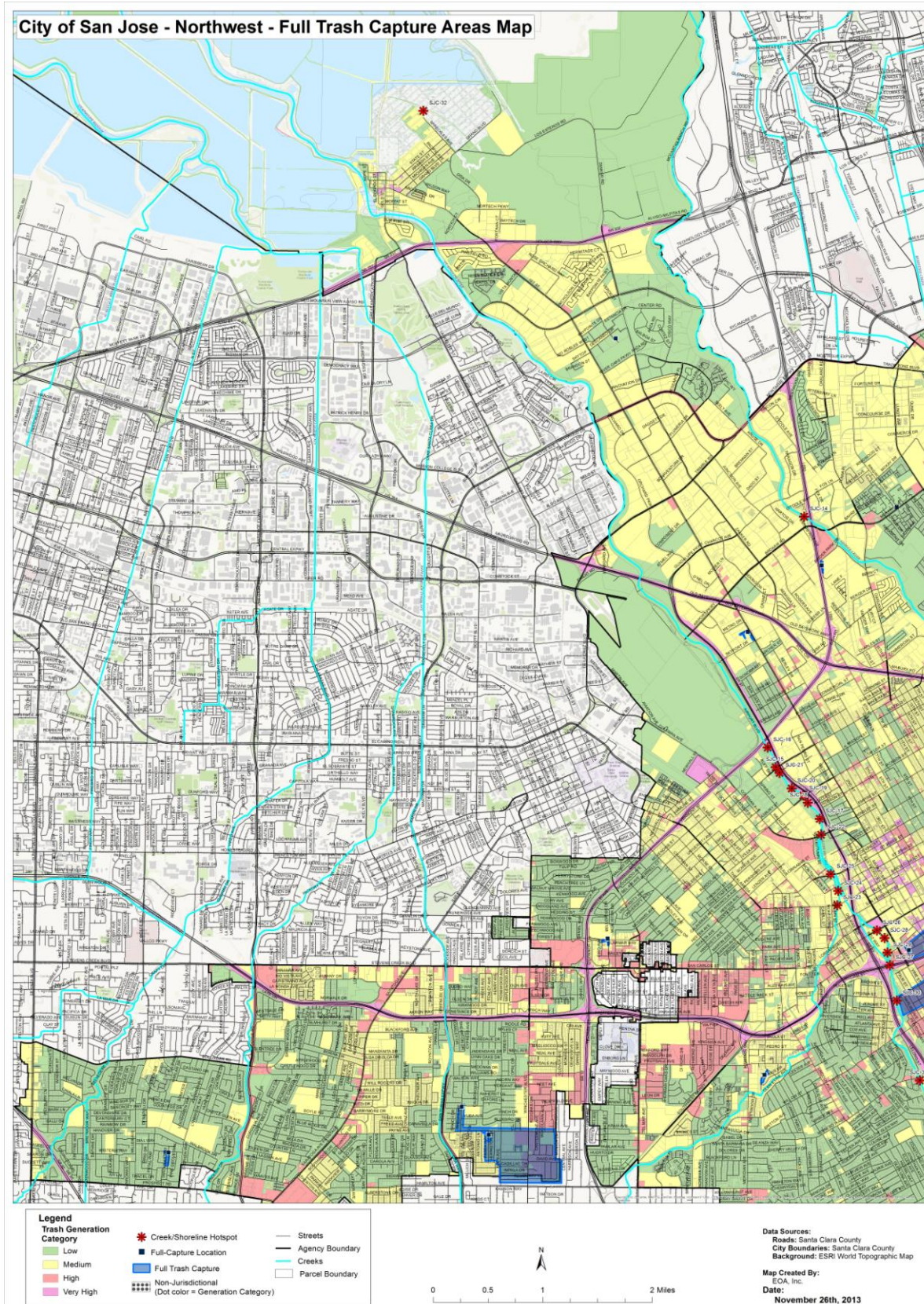


Figure 19. Trash Full-Capture Device Map for the City of San José Northwest Quadrant

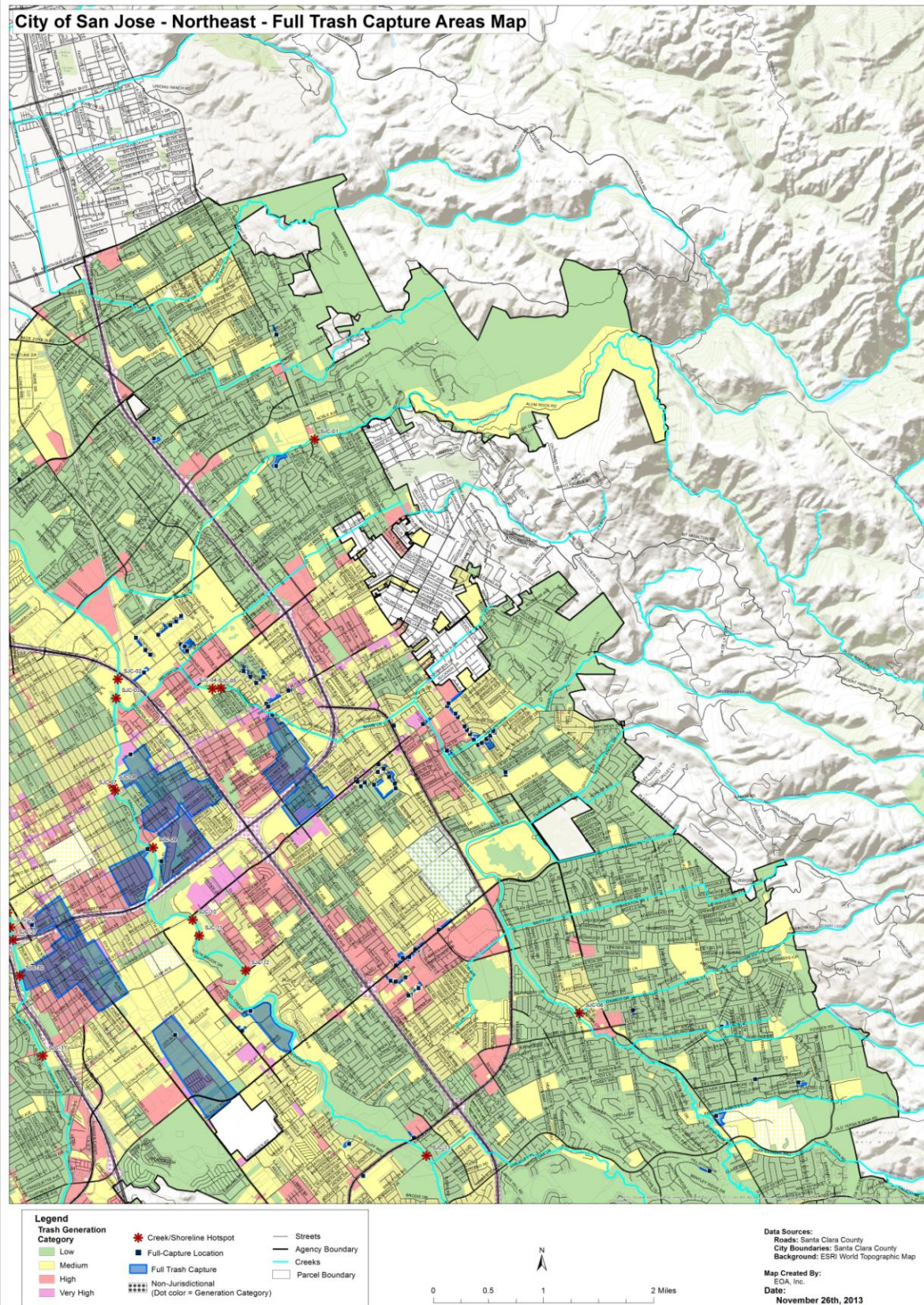


Figure 20. Trash Full-Capture Device Map for the City of San José Northeast Quadrant

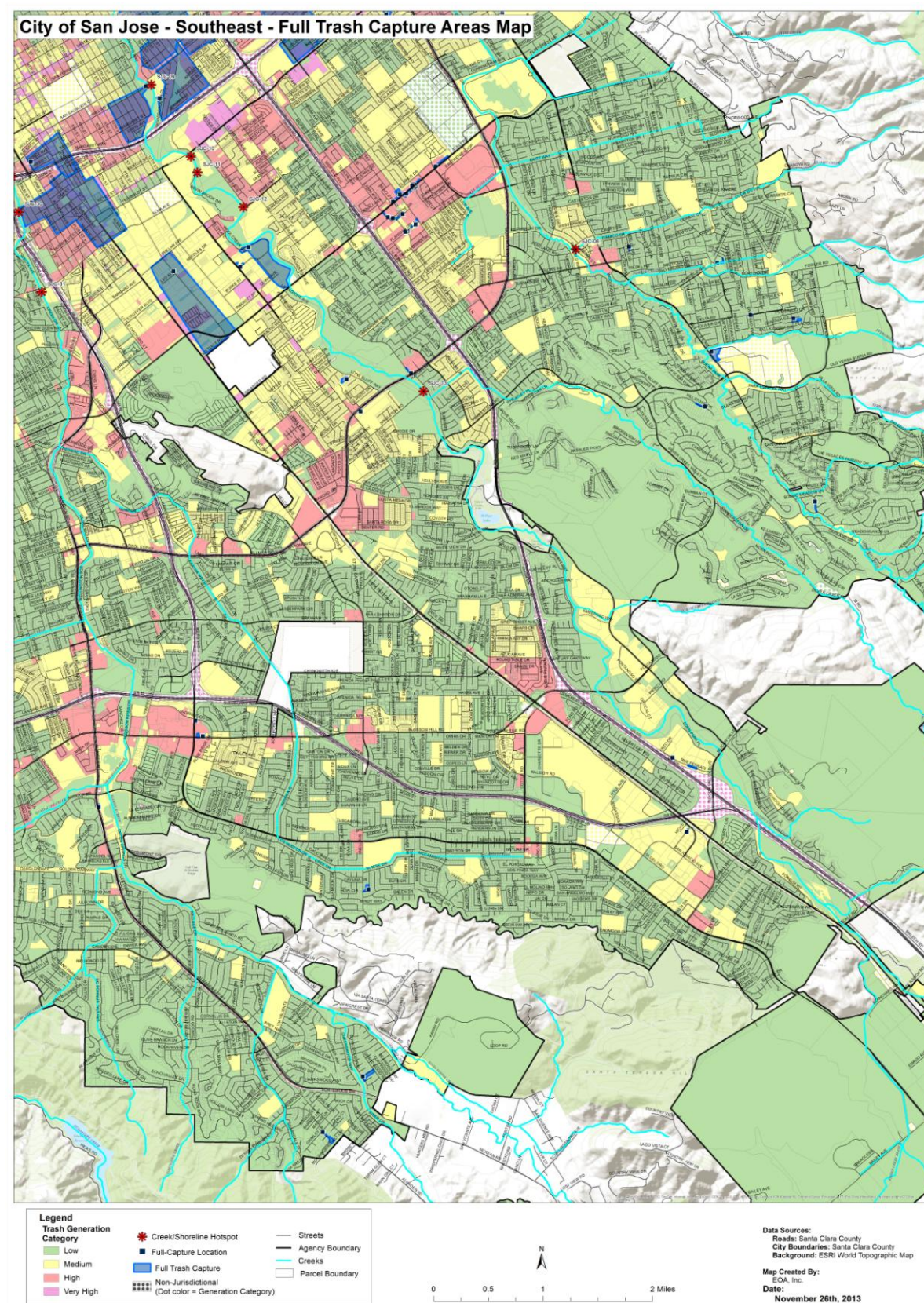


Figure 21. Trash Full-Capture Device Map for the City of San José Southeast Quadrant

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3.2.1 Trash Management Area #1

TMA 1 includes the San José Downtown Business District. Within this district subdivisions for a Property Based Improvement District (PBID) exist; these subdivisions are divided into the central (1C), east (1E), and west (1W) areas. The services of the PBID include trash management actions such as servicing particular public litter cans and the employment of Groundwerx to maintain cleanliness within the PBID boundary. All sections of TMA 1 represent a priority area for the City given the high proportion of very high and high loading present throughout this area. Sources of litter within this TMA include pedestrian and vehicle litter, individuals going through public litter cans, and homeless individuals.

Full-Capture Treatment Devices

- 2009 – 2014:
 - Installed a CDS unit. This unit treats 58 acres in TMAs 1 and 5.
 - Installed 2 CPS devices.

Street Sweeping & Improved Trash Bins/Container Management

- Pre-MRP:
 - The City supported the successful establishment of the Downtown San José Property Based Improvement District (PBID). The Downtown PBID, among its enhanced services, incorporates sidewalk sweeping, litter pickup, and maintenance of public area trash containers at least once per week in retail/wholesale and commercial areas.

3.2.2 Trash Management Area #2

TMA 2 includes the neighborhood east of 87 and west of S 1st Street and south past Alma Avenue to an industrial area just north of San José Avenue. This area is a priority for the City, as more than 90% has a very high, high, or medium loading.

Full-Capture Treatment Devices

- 2009 – 2014:
 - Installed a CDS unit. This unit treats 223 acres – 85 acres in TMA 5 and 138 acres in TMA 2.
 - Installed 4 CPS devices.

Street Sweeping

- 2009 – 2014:
 - Added 6.9 curb miles (CM) of parking signage for street sweeping and enforcement to the Virginia – Washington neighborhood. These enhancements are in TMA 2 and T.

3.2.3 Trash Management Area #3

TMA 3 extends east of 4th Street to Coyote Creek and south of the Santa Clara Business District (TMA 8SC) to 280. TMA 3 is a high priority for the City since more than 50% of the land area is a very high or high trash generation area.

Full-Capture Treatment Devices

- 2009 – 2014:
 - Installed a CDS unit. This unit treats 74 acres in TMA 3.

3.2.4 Trash Management Area #4

TMA 4 extends east of Coyote Creek to 101 and south of the Santa Clara Business District (TMA 8SC) to 280. TMA 4 is a high priority for the City since the vast majority of this TMA has very high, high, or medium trash generation rates.

Full-Capture Treatment Devices

- 2009 – 2014:
 - Installed 2 CDS units. One unit treats 208 acres (186 acres in TMA 4 and 22 acres in TMA 8SC) and the other treats 105 acres in TMA 4.
 - Installed a CPS device.

Street Sweeping

- 2009 – 2014:
 - Addition of 14.4 CM of parking signage for street sweeping and enforcement to the Olinder neighborhood.
 - Addition of 3 CM of parking signage for street sweeping and enforcement to the N 33rd neighborhood.

Community Engagement – Anti-Gang & Blight Interdepartmental Coordination

- 2009 – 2014:
 - Citywide coordination among the Environmental Services Department; Parks, Recreation and Neighborhood Services; Police; and Planning, Building, and Code Enforcement to leverage anti-gang resources to control blight and litter in gang hotspots throughout the City through community engagement and enforcement. This program is currently under development and planned to be initially implemented in four areas throughout San José. This TMA includes one of the four areas proposed to be included in this pilot.

On-land Trash Cleanups

- 2009 – 2014:
 - In 2012, the Housing Department initiated the Place-Based Neighborhoods program which works to create clean, safe, and engaged neighborhoods in three areas of the City. The Code Enforcement Division of the City participates in blight reduction efforts as part of this program, and Downtown Streets Team volunteers clean up litter and dumping. One of these neighborhoods is within TMA 4.

3.2.5 Trash Management Area #5

TMA 5 represents the area south of 280 and east of S 1st Street to Coyote Creek and south to Alma Avenue. TMA 5 is a high priority for the City since more than 80% of the acreage has a very high, high, or medium trash generation rate.

Full-Capture Treatment Devices

- 2009 – 2014:
 - Partial treatment of the TMA by a CDS installed in TMA 1 (14 acres) and another CDS installed in TMA 2 (85 acres).

Street Sweeping

- 2009 – 2014:
 - Added 5.4 CM of parking signage for street sweeping and enforcement to Virginia – Spartan Keyes neighborhood.

3.2.6 Trash Management Area #6

TMA 6 is the area bordered by Senter Road, Story Road, 101, and Tully Road. TMA 6 is a high priority for the City as greater than 75% of the area has a very high, high, or medium trash generation rate.

Full-Capture Treatment Devices

- 2009 – 2014:
 - Installed a CDS unit. This unit treats 48 acres in TMA 6.
 - Installed 7 CPS devices.

On-land Trash Cleanups

- 2009 – 2014:
 - In 2012, the Housing Department initiated the Place-Based Neighborhoods program which works to create clean, safe, and engaged neighborhoods in three areas of the City. The Code Enforcement Division of the City participates in blight reduction efforts as part of this program, and Downtown Streets Team volunteers clean up litter and dumping. One of these neighborhoods is within TMA 6.

3.2.7 Trash Management Area #7

TMA 7 includes the area bordered by 101 and 280/680 south of the Alum Rock Business District (TMA 8AR). TMA 7 is a high priority for the City as almost 90% has a very high, high, or medium trash generation rate.

Full-Capture Treatment Devices

- 2009 – 2014:
 - Installed a CDS unit. This unit treats 173 acres – 104 acres in TMA 7, 58 acres in TMA 10, and 11 acres in 8SR.

Street Sweeping

- 2009 – 2014:
 - Added 3.9 CM of parking signage for street sweeping and enforcement to the Heller neighborhood.

On-land Trash Cleanups

- 2009 – 2014:
 - In 2012, the Housing Department initiated the Place-Based Neighborhoods program which works to create clean, safe, and engaged neighborhoods in three areas of the City. The Code Enforcement Division of the City participates in blight reduction efforts as part of this program, and Downtown Streets Team volunteers clean up litter and dumping. One of these neighborhoods is within TMA 7.

Community Engagement – Anti-Gang & Blight Interdepartmental Coordination

- 2009 – 2014:
 - Citywide coordination among the Environmental Services Department; Parks, Recreation and Neighborhood Services; Police; and Planning, Building, and Code Enforcement to leverage anti-gang resources to control blight and litter in gang hotspots throughout the City through community engagement and enforcement. This program is currently under development and planned to be initially implemented in four areas throughout San José. This TMA includes one of the four areas proposed to be included in this pilot.

3.2.8 Trash Management Area #8

TMA 8 includes various business districts Citywide. This TMA is further subdivided geographically and grouped by retail and commercial areas in particular areas of San José. The geographical subdivisions of this TMA may be revised and regrouped based on the control measures implemented in these areas and

other factors. Sources of litter within these areas include pedestrian and vehicle traffic. Typically this litter includes a high proportion of disposable food and convenience items, often from businesses located within the area. All TMAs within the “TMA 8” designation represent a high priority for the City given the high proportions of very high, high, and medium trash generation rates generally present within these areas. Multiple areas within TMA 8 have all of their area or nearly all of their area within the high generation category.

Full-Capture Treatment Devices

- Pre-MRP:
 - Installed 8 CPS devices.

Improved Trash Bins/Container Management

- 2009 – 2014:
 - In 2012, the City initiated a new solid waste inspection program. The program tracking and educational materials are currently under development. The Inspectors have been conducting initial inspections in commercial areas within the City and alerting businesses to issues with the management of the debris bins and waste storage areas.
 - The City is planning to develop a targeted education and enforcement campaign to work with neighborhood business associations to prevent and clean up trash and litter in the business districts. Currently the City is evaluating neighborhood business districts for a pilot program in 2 of the City’s 9 districts and anticipates starting work in the first business district in FY 13-14. The goal of this project is to have no litter remaining for more than 24 hours.
 - Planned coordination with business districts to identify locations in need of public litter can placement and services to reduce trash accumulation on streets.

3.2.9 Trash Management Area #9

TMA 9 is the area east of 101 from Tully Road south to Capitol Expressway and east to Quimby Road. TMA 9 is a high priority area for the City since over 90% of its area is in the high or medium trash generation rate.

Full-Capture Treatment Devices

- Pre-MRP:
 - Installed 10 CPS devices.
- 2009 – 2014:
 - Installed 7 CPS devices.

Partial-Capture Treatment Devices

- 2009 – 2014:
 - The City will be conducting a pilot project utilizing automatic retractable screens (ARS) in FY 13-14. The pilot would include approximately one hundred inlets located within TMA 9. The targeted neighborhood is adjacent to a large retail mall and has high and medium trash loading areas. Parking restrictions and enforcement are already in place for street sweeping throughout the proposed pilot area.

3.2.10 Trash Management Area #10

TMA 10 includes the area north of Ocala Avenue to Capitol Expressway and Murtha Drive north to the Alum Rock Business District (TMA 8AR) that is not included in TMA 8. TMA 10 is a moderate priority for the City; the majority of its area falls within the medium trash generation rate.

Full-Capture Treatment Devices

- Pre-MRP:
 - Installed 18 CPS devices.

3.2.11 Trash Management Area #11

TMA 11 is the area east of 101 and north of Tully Road that is not included in TMA 10. TMA 11 is a high priority for the City based on the fact that over 75% of its area falls within the high or medium trash generation rates. The City will conduct additional evaluation of this TMA to determine the appropriateness of additional trash control measures.

Full-Capture Treatment Devices

- Pre-MRP:
 - Installed 5 CPS devices.

3.2.12 Trash Management Area #12

TMA 12 is bordered by 280 and 17 and south of Payne Avenue that is not part of the Winchester Business District (TMA 8W). TMA 12 is a moderate priority for the City; the majority of its area (66%) falls within the medium trash generation rate.

Full-Capture Treatment Devices

- Pre-MRP:
 - N/A
- 2009 – 2014:
 - Installed a CDS unit. This unit treats 185 acres – 153 acres in TMA 12 and 32 acres in TMA 8W.
 - Installed 2 CPS devices.

Street Sweeping

- 2009 – 2014:
 - Addition of 2.1 CM of parking signage for street sweeping and enforcement to the Driftwood neighborhood.

Community Engagement – Anti-Gang & Blight Interdepartmental Coordination

- 2009 – 2014:
 - Citywide coordination among the Environmental Services Department; Parks, Recreation and Neighborhood Services; Police; and Planning, Building, and Code Enforcement to leverage anti-gang resources to control blight and litter in gang hotspots throughout the City through community engagement and enforcement. This program is currently under development and planned to be initially implemented in four areas throughout San José. This TMA includes one of the four areas proposed to be included in this pilot. Program expansion is contingent upon future funding.

3.2.13 Trash Management Area #13

TMA 13 is bordered by Branham Lane East, 101, Blossom Hill Road, and Monterey Road. TMA 13 represents a high priority for the City. While the percentages of areas within high or medium loading (55.9%) is lower than some areas, this TMA has been prioritized based on existing known crime, illegal dumping, litter, and blight issues.

Community Engagement – Anti-Gang & Blight Interdepartmental Coordination

- 2009 – 2014:
 - Citywide coordination among the Environmental Services Department; Parks, Recreation and Neighborhood Services; Police; and Planning, Building, and Code Enforcement to leverage anti-gang resources to control blight and litter in gang hotspots throughout the City through community engagement and enforcement. This program is currently under development and planned to be initially implemented in four areas throughout San José. This TMA includes one of the four areas proposed to be included in this pilot. Program expansion is contingent upon future funding.

3.2.14 Trash Management Area #14

TMA 14 is bordered by Saratoga Avenue south to 280 to San Tomas Expressway and south to Payne Avenue. TMA 14 represents a moderate priority for the City since over 70% of its area falls within the medium trash generation rate. The City will conduct additional evaluation of this TMA to determine the appropriateness of additional trash control measures.

Improved Trash Bins/Container Management

- 2009 – 2014:
 - In 2012, the City initiated a new solid waste inspection program. The program tracking and educational materials are currently under development. The Inspectors have been conducting initial inspections in commercial areas within the City and alerting businesses to issues with the management of the debris bins and waste storage areas.

Trash Management Areas A – AF

TMA A – AF are areas that the City has identified where trash control measures are needed but require additional detailed analysis necessary to determine appropriate programming. These TMAs will be programmed with trash reduction actions in a post-2014 timeframe as part of a two-step process as follows:

1. Evaluate all new control measures being implemented in the 2009-2014 timeframe to determine effectiveness, appropriateness for implementation in other TMAs, and opportunities for continuous improvement.
2. Conduct more refined or detailed assessments in TMAs for which control measures have yet to be programmed and determine specific actions for each specific TMA. The City of San José proposes using the annual report process to update the Regional Board on its progress in implementing post-2014 actions.

The City will conduct pilot testing and assessment of TMAs over the next two years and then proceed to prioritization and implementation starting in 2015.

Prioritization of the TMAs will be determined by assessing key factors including trash generation rates, visual impacts of on land and in channel trash conditions, capacity of the City to effect improvements through the implementation of control measures, and the contribution of trash control measures to the local community's quality of life. The City's process for prioritization of these TMAs is:

1. Evaluate the severity of each TMA's trash burden based on visual assessments, local knowledge, and predominance of very high, high, and/or medium trash generation areas.
2. Examine each TMA which has yet to be definitively programmed with trash reduction actions and consider the efficacy of possible options. This includes evaluating full-capture or full-capture equivalency candidacy.
3. Assess the relative costs and benefits of implementation in each TMA.

4. Identify any opportunities to leverage the activities of other community service programs working in the TMA.
5. Estimate the amount of progress that the City can reasonably expect from that area.

The additional prioritization, analysis, and programming for the remaining 33 areas will be completed by the end of FY 15-16. The City will provide continual TMA updating of planning and implementation activity as part of the annual report process.

3.2.15 Trash Management Area A

TMA A includes all urban parks within the City of San José. The main source of litter is pedestrian traffic as well as remnants of parties and other outdoor events held in these venues.

On-land Trash Cleanups

- 2009 – 2014:
 - In 2012, the Parks Division of the City's Parks, Recreation and Neighborhood Services Department (PRNS) implemented an activity data tracking system called Business Intelligence (BI). Through BI, PRNS now tracks trash collection activities and trash collection quantities. This information will be utilized to support the City's trash generation and collection information.
 - In 2013, San José Park Rangers started patrolling waterways to reduce illegal encampment activity and issuing criminal citations to individuals for illegal activity that results in waterway degradation. Rangers and PRNS maintenance staff also supervise volunteer creek clean up activity along City trails and waterways.

The City will evaluate the feasibility of expanded on-land trash cleanups; improved trash bin and container management; creek, channel, and shoreline cleanups; and community engagement to manage trash within parks.

3.2.16 Trash Management Area B

TMA B is comprised of all schools within the City of San José, where the main source of litter is pedestrian traffic.

- 2009 – 2014:
 - Develop a comprehensive anti-litter education and prevention program for all K-12 schools that will be integrated into a broader environmental education curriculum to be implemented in coordination with the Environmental Services Department, other City programs, and outside stakeholders.
 - Participation in the Schools/City Collaborative, a meeting of school Superintendents in Santa Clara County, to explore and develop trash reduction programs and projects.
 - Seek opportunities to leverage other City resources to enhance the following trash reduction activities: on-land trash cleanups, improved trash bins and container management, and community engagement to address litter around schools.
- Post-2014:
 - A schools conference is planned for the first quarter of 2015. The conference includes presentations and resources to green schools and will include trash reduction information.
 - Potential expansion of above programs.

3.2.17 Trash Management Area C

TMA C represents an area of the City north of 280 from Lawrence Expressway to Santana Row. Trash sources in this area require additional detailed assessment but likely include pedestrian and vehicle litter as well as windblown litter from the freeway. The City will evaluate the feasibility of seeking opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities and improved trash bin and container management in this TMA.

3.2.18 Trash Management Area D

TMA D includes Westgate Mall and the surrounding retail area. The City will evaluate the feasibility of constructing full-capture treatment devices, improving processes related to on-land trash cleanups, identifying candidate areas for partial-capture treatment devices, and seeking opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities and improved trash bins/container management for this area.

3.2.19 Trash Management Area E

TMA E includes Bascom Avenue south of 280 to Hamilton Avenue and Southwest Expressway. This area may include windblown as well as vehicle litter from the freeway and surface streets. Pedestrian litter is also a likely contributor to trash in this area as it includes a popular Light Rail transit route. The City will evaluate the feasibility of constructing full-capture treatment devices; assessing the feasibility of adding street sweeping with “No Parking” signage; improving processes related to on-land trash cleanups; identifying candidate areas for partial-capture treatment devices; and seeking opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, creek cleanups, and community engagement in this TMA.

3.2.20 Trash Management Area F

TMA F includes higher loading areas surrounding Bascom Avenue and Camden Avenue and extending east to Hillsdale Avenue and Ross Avenue. The City will evaluate the feasibility of constructing additional full-capture treatment devices; assess the feasibility of adding street sweeping with “No Parking” signage; improve processes related to on-land trash cleanups; identify candidate areas for partial-capture treatment devices; and seek opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, and community engagement in this TMA.

Full-Capture Treatment Devices

- Pre-MRP:
 - N/A
- 2009 – 2014:
 - Installed 2 CPS devices.

3.2.21 Trash Management Area G

TMA G includes the area west of 87 and north of 280 that is not included in business districts. The City will evaluate the feasibility of constructing additional full-capture treatment devices; assess the feasibility of adding street sweeping with “No Parking” signage; improve processes related to on-land trash cleanups; identify candidate areas for partial-capture treatment devices; and seek opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, creek cleanups, and community engagement in this TMA.

3.2.22 Trash Management Area H

TMA H includes the area west of Lincoln Avenue and south of 280 around Meridian Avenue. The City will evaluate the feasibility of adding street sweeping with “No Parking” signage; improve processes related to on-land trash cleanups; identify candidate areas for partial-capture treatment devices; and seek opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, creek cleanups, and community engagement in this TMA.

Full-Capture Treatment Devices

- Pre-MRP:
 - N/A
- 2009 – 2014:
 - Installed a CPS device.

3.2.23 Trash Management Area I

TMA I represents the neighborhood bordered by 87, Willow Street, and Delmas Avenue. The City will evaluate the feasibility of adding street sweeping with “No Parking” signage; improve processes related to on-land trash cleanups; identify candidate areas for partial-capture treatment devices; and seek opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, and community engagement in this TMA.

3.2.24 Trash Management Area J

TMA J includes Princeton Plaza and the surrounding neighborhood to the west. The City will evaluate the feasibility of constructing full-capture treatment devices, assess the feasibility of adding street sweeping with “No Parking” signage, identify candidate areas for partial-capture treatment devices, and seek opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities and community engagement in this TMA.

3.2.25 Trash Management Area K

TMA K includes high loading neighborhoods and retail areas from Branham Lane and Almaden Expressway south to Blossom Hill Road continuing along Blossom Hill Road to Chesbro Road. This TMA’s litter sources likely include windblown litter from the freeway that divides this area as well as additional vehicular or pedestrian litter. Improper container management may also be a contributing factor given the high proportion of retail throughout this area. The City of San José will be evaluating the feasibility of all control measures for their implementation in this area: constructing additional full-capture treatment devices; assessing the feasibility of adding street sweeping with “No Parking” signage; improving processes related to on-land trash cleanups; identifying candidate areas for partial-capture treatment devices; and seeking opportunities to leverage other City resources to enhance anti-littering and illegal dumping enforcement activities, improved trash bin and container management, creek cleanups, and community engagement in this TMA.

Full-Capture Treatment Devices

- 2009 – 2014:
 - Installed 2 CPS devices.

Street Sweeping

- 2009 – 2014:
 - Added 3.4 CM of parking signage for street sweeping and enforcement to the Allen neighborhood.

3.2.26 Trash Management Area L

TMA L includes medium loading neighborhoods along the north side of Blossom Hill Road from Snell Avenue to Dobie Drive. The City will evaluate the feasibility of adding street sweeping with “No Parking” signage; improve processes related to on-land trash cleanups; identify candidate areas for partial-capture treatment devices; and seek opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, and community engagement in this TMA.

3.2.27 Trash Management Area M

TMA M includes high loading areas near the intersection of Cottle Road and Poughkeepsie Road. The City will evaluate the feasibility of constructing additional full-capture treatment devices; assess the feasibility of adding street sweeping with “No Parking” signage; improve processes related to on-land trash cleanups; identify candidate areas for partial-capture treatment devices; and seek opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, creek cleanups, and community engagement in this TMA.

3.2.28 Trash Management Area N

TMA N is bordered by Charlotte Road, Great Oaks Parkway, and 85. The City will evaluate the feasibility of improving processes related to on-land trash cleanups; identify candidate areas for partial-capture treatment devices; and seek opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, creek cleanups, and community engagement in this TMA.

3.2.29 Trash Management Area O

TMA O includes Kaiser San José and the area roughly bordered by 85, Bernal Road, and Santa Teresa Boulevard. The City of San José will evaluate the feasibility of improving processes related to on-land trash cleanups; identify candidate areas for partial-capture treatment devices; and seek opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, and community engagement in this TMA.

Full-Capture Treatment Devices

- 2009 – 2014:
 - Installed one CPS device.

3.2.30 Trash Management Area P

TMA P encompasses medium loading industrial and commercial areas along Hellyer Road south to Silicon Valley Road and west to 101. The City will evaluate the feasibility of assessing the feasibility of adding street sweeping with “No Parking” signage; improve processes related to on-land trash cleanups; identify candidate areas for partial-capture treatment devices; and seek opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, and community engagement in this TMA.

Full-Capture Treatment Devices

- 2009 – 2014:
 - Installed one CPS device.

3.2.31 Trash Management Area Q

TMA Q includes higher loading areas along Capitol Expressway from Almaden Expressway east to Monterey Road. This area will be evaluated for the feasibility of constructing additional full-capture treatment devices; adding street sweeping with “No Parking” signage; improving processes related to on-land trash cleanups; identifying candidate areas for partial-capture treatment devices; and seeking opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, and community engagement,

3.2.32 Trash Management Area R

TMA R encompasses the area east of Coyote Creek south of 280 to 101 and north of Story Road. Control measures that will be explored for implementation in TMA R include constructing additional full-capture treatment devices; assessing the feasibility of adding street sweeping with “No Parking” signage; improving processes related to on-land trash cleanups; identifying candidate areas for partial-capture treatment devices; and seeking opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, creek cleanups, and community engagement in this TMA.

Street Sweeping

- 2009 – 2014:
 - Added 0.9 curb miles (CM) of parking signage for street sweeping and enforcement to the Story neighborhood.

3.2.33 Trash Management Area S

TMA S includes high loading areas around Almaden Expressway and Almaden Road west of 87. The City of San José will evaluate the feasibility of constructing additional full-capture treatment devices; assess the feasibility of adding street sweeping with “No Parking” signage; improve processes related to on-land trash cleanups; identify candidate areas for partial-capture treatment devices; and seek opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, creek cleanups, and community engagement in this TMA.

3.2.34 Trash Management Area T

TMA T includes an area of the City south of TMAs 2 and 5 and west of Senter Road, extending south to areas surrounding Capitol Expressway east of Monterey Road. The City will evaluate the feasibility of constructing additional full-capture treatment devices; assess the feasibility of adding street sweeping with “No Parking” signage; improve processes related to on-land trash cleanups; identify candidate areas for partial-capture treatment devices; and seek opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, and community engagement within TMA T.

Full-Capture Treatment Devices

- 2009 – 2014:
 - Installed 3 CPS devices.
 - Installed a CDS unit. This unit treats 178 acres in TMA T.

Street Sweeping

- 2009 – 2014:
 - Added 6.9 curb miles (CM) of parking signage for street sweeping and enforcement to the Virginia – Washington neighborhood. These enhancements are in TMA 2 and T.

3.2.35 Trash Management Area U

TMA U represents high trash loading areas along White Road from Quimby Road south to Aborn Road. The City of San José will be exploring all control measures for their potential implementation in this area: evaluating the feasibility of constructing additional full-capture treatment devices; assessing the feasibility of adding street sweeping with “No Parking” signage; improving processes related to on-land trash cleanups; identifying candidate areas for partial-capture treatment devices; and seeking opportunities to leverage other City resources to enhance anti-littering and illegal dumping enforcement activities, improved trash bin and container management, creek cleanups, and community engagement in this TMA.

3.2.36 Trash Management Area V

TMA V is roughly bordered by McLaughlin Avenue, Capitol Expressway, 101, and Yerba Buena Road. Control measures to be explored for implementation in TMA V include assessing the feasibility of adding street sweeping with “No Parking” signage; improving processes related to on-land trash cleanups; identifying candidate areas for partial-capture treatment devices; and seeking opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, and community engagement

3.2.37 Trash Management Area W

TMA W extends to areas east of 87, north to 880 and 101, and south to the Santa Clara Street Business District that are not included in TMA 8. The City will identify candidate areas for partial-capture treatment devices and seek opportunities to leverage other City resources to enhance anti-littering and illegal dumping enforcement activities, improved trash bin and container management, and community engagement for implementation in TMA W.

3.2.38 Trash Management Area X

TMA X includes North San José between Guadalupe River and Coyote Creek from Brokaw Road north to 237. This area will be assessed to identify candidate areas for partial-capture treatment devices, and the City will seek opportunities to leverage other resources to enhance anti-littering and illegal dumping enforcement activities, improved trash bin and container management, and creek cleanups to control trash in this area.

3.2.39 Trash Management Area Y

TMA Y is a mainly industrial area in North San José east of Coyote Creek and south of Montague Expressway surrounding Lundy Avenue. Possible control measures for this area include identifying candidate areas for partial-capture treatment devices and seeking opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, creek cleanups, and community engagement.

3.2.40 Trash Management Area Z

TMA Z encompasses the area south of Brokaw Road between Guadalupe River and Coyote Creek that includes the land surrounding Skyport Drive, Old Bayshore Highway, and Commercial Street. Identifying candidate areas for partial-capture treatment devices and seeking opportunities to leverage other City resources to enhance anti-littering and illegal dumping enforcement activities and improved trash bin and container management will be possibly utilized in this area.

Full-Capture Treatment Devices

- 2009 – 2014:
 - Installed 2 CPS devices.

3.2.41 Trash Management Area AA

TMA AA includes Berryessa Road at Coyote Creek and extends south through the King Road area to the Alum Rock Business District (TMA 8AR). Possible control measures implemented in TMA AA include constructing additional full-capture treatment devices; assessing the feasibility of adding street sweeping with “No Parking” signage; improving processes related to on-land trash cleanups; identifying candidate areas for partial-capture treatment devices; and seeking opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, and community engagement.

Full-Capture Treatment Devices

- Pre-MRP:
 - Installed 22 CPS devices.

Street Sweeping

- 2009 – 2014:
 - Added 1.6 CM of parking signage for street sweeping and enforcement to the Mammoth neighborhood.
 - Added 2.8 CM of parking signage for street sweeping and enforcement to the Balboa/Plata Arroyo neighborhood.

3.2.42 Trash Management Area AB

TMA AB covers the neighborhood roughly bordered by Capitol Expressway, Story Road, Clayton and Mount Pleasant Roads, and Ocala and Marten Avenues. The City of San José will be exploring constructing additional full-capture treatment devices; assessing the feasibility of adding street sweeping with “No Parking” signage; improving processes related to on-land trash cleanups; identifying candidate areas for partial-capture treatment devices; and seeking opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, and community engagement within TMA AB.

Full-Capture Treatment Devices

- Pre-MRP:
 - Installed 22 CPS devices.

3.2.43 Trash Management Area AC

TMA AC includes the area east of 680 at McKee Road south to the Alum Rock Business District and also the area surrounding La Pala Drive off of McKee Road. TMA AC may be treated by constructing additional full-capture treatment devices; assessing the feasibility of adding street sweeping with “No Parking” signage; improving processes related to on-land trash cleanups; identifying candidate areas for partial-capture treatment devices; and seeking opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, creek cleanups, and community engagement.

3.2.44 Trash Management Area AD

TMA AD includes the neighborhood along Hostetter Road between Morrill Road and Piedmont Road. Possible control measures in TMA AD include seeking opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, creek cleanups, and community engagement.

3.2.45 Trash Management Area AE

TMA AE includes all planned Urban Villages within the City of San José that are expected to be completed by 2022. The City of San José will be considering constructing additional full-capture treatment

devices; assessing the feasibility of adding street sweeping with “No Parking” signage; improving processes related to on-land trash cleanups; identifying candidate areas for partial-capture treatment devices; and seeking opportunities to leverage other City resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities, improved trash bin and container management, and community engagement within TMA AE. While TMA AE does not currently represent a high priority for the City of San José based on current generation data, the City anticipates these areas becoming higher priorities as they develop because the changes in land uses and population density could have a significant effect on trash generation within each area. These areas also represent a valuable opportunity to incorporate trash control measures into the original planning and design of these areas and potentially incorporate a wider range of control measures rather than having to fit control measures into existing infrastructure limitations.

3.2.46 Trash Management Area AF

TMA AF represents the Alviso area of San José in the north part of the City. TMA AF will be evaluated for the feasibility of adding street sweeping with “No Parking” signage, improving processes related to on-land trash cleanups, and identifying candidate areas for partial-capture treatment devices. The City will also seek opportunities to leverage other resources to enhance the following trash reduction activities: anti-littering and illegal dumping enforcement activities; improved trash bin and container management; creek, channel, or shoreline cleanups, and community engagement within TMA AF.

3.2.47 Trash Management Area AG

TMA AG represents the remaining City area. Constructing additional full-capture treatment devices, assessing the feasibility of adding street sweeping with “No Parking” signs, and seeking opportunities to enhance trash bin container management will be assessed and implemented as allowable throughout this area; however, since the majority of this TMA (97.9%) has low trash generation rates, TMA AG is of low priority for the City.

Full-Capture Treatment Devices

- 2009 – 2014:
 - Installed 16 CPS devices.

3.2.48 Jurisdiction-wide Control Measures

Trash control within the City of San José represents a huge challenge given the large land area to be covered as well as the diversity of land uses, incomes, and neighborhood characteristics and dynamics present throughout the City; however, there are some litter problems that have been observed throughout San José. Examples of common types of jurisdiction-wide litter include single-use packaging and cigarette butts. Studies indicate that males between the age of 16 – 24 are generally the group most likely to litter. In response, the City Council has taken action to work towards reducing some of these ubiquitous pollutants. These actions include ordinances regulating single-use carryout bags as well as expanded polystyrene. The City is also planning to pursue a leadership role in developing a litter and trash reduction program for use within schools to create a generation of stewards for our creeks and environment.

Single-Use Carryout Bag Policies

- 2009 – 2014:
 - The City's Single-Use Carryout Bag Ordinance (available at http://www.sanjoseca.gov/clerk/ORDS_RESOS/ORD_28877.pdf) took effect on January 1, 2012. The ordinance applies to all grocery and retail stores located within or doing business within the City limits. It prohibits single-use plastic bags and allows for the sale of recycled content paper bags for a minimum price.
 - Enforcement is conducted through a complaint-based program which entails contacting and/or conducting field inspections of businesses upon receipt of complaints through email or phone.
 - Phone calls and emails received from the public informing the program of non-compliant businesses prompt the creation of a case (inquiry) regarding the non-compliant business. Inquiries require Environmental Inspectors to investigate, educate, and work with businesses in order to achieve compliance. From ordinance implementation on 1/1/12 to 6/30/13, 156 total inquiries were generated and 92 inquiries were generated in FY12-13.
 - Compliance has largely been achieved through education during inspections as well as Correction Notices and Official Warning Notices. No Administrative Citations were required since Bring Your Own Bag (BYOB) ordinance implementation. Compliance meetings with businesses have been used as an effective way to develop and implement timelines for achieving compliance.
 - Since BYOB ordinance implementation, positive impacts have been documented in creek, neighborhood, and storm drain conditions. In creek and river litter surveys, single-use plastic bags dropped from 8.2% of total litter to 3.7%. In neighborhood litter studies the percentage of single-use plastic bag litter dropped from 5.1% to 2.1%. The average rate of single-use plastic bags/inlet/year dropped from 3.6 to 0.4. In addition to these metrics, visual surveys at retail locations indicate an increase in reusable bag usage from 3.6% pre-ordinance to 62.4% post-ordinance. Additional metrics and the details of these surveys can be found in a report to the City's Transportation and Environment Committee in December 2012 available at http://www3.sanjoseca.gov/clerk/CommitteeAgenda/TE/20121203/TE20121203_d5.pdf.
- Post-2014:
 - Continued evaluation of ordinance effectiveness and consideration of ordinance amendments as necessary.

Polystyrene Foam Food Service Ware Policies

- 2009 – 2014:
 - Effective May 1, 2010, the City of San José adopted a policy prohibiting food vendors from distributing polystyrene foam food and beverage ware at large events on Permittee-owned property.
 - On April 24, 2012, City Council approved an amendment to the City's Environmentally Preferable Procurement (EP3) Policy, or EP3, (http://www.sanjoseca.gov/clerk/cp_manual/CPM_4_6.pdf) to provide guidelines for a prohibition on the purchase of EPS foam food ware. The new policy incorporates prohibitions on purchases of EPS foam food ware into the City's established EP3 policy. The new EP3 policy language covers all City facilities and the use of City funds regarding the purchase of food service ware containers and take-out food packaged in containers made from EPS such as cups, plates, and bowls.
 - On February 26, 2013 City Council directed staff to proceed with reviewing the potential impacts of banning EPS foam food packaging citywide and to work on a county-wide environmental review of phasing out EPS. The CEQA review was completed in fall 2013.
 - Bilingual outreach on the proposed EPS phase out continued with a series of Regional Food Ware Vendor Open Houses. These open houses, presented in collaboration with Morgan Hill, Sunnyvale, Los Altos, Cupertino, and Mountain View, presented an opportunity for food service establishments explore alternative materials, get pricing information, and speak to municipal staff regarding potential ordinances. Two of these open houses took place in FY 12-13 and a third occurred on August 6, 2013 in Sunnyvale. The San José event, which took place in the morning and afternoon of June 5, 2013, was attended by 13 representatives from 11 food service establishments. Eighteen food ware distributors, brokers, or manufacturers were represented through the event. In addition to these purchasing resources, the manager of a local restaurant that utilizes alternatives was available in the afternoon session to speak to restaurants and answer questions regarding their use of alternative products.
 - In addition to a regional Open House, the City of San José has also held Information Sessions relating to the expanded polystyrene ordinance. These events took place on July 15, 2013 and November 4, 2013. Twenty-five members of the public attended these two events.
 - In September 2013, Council approved an ordinance to phase-out the use of polystyrene food ware in restaurants. San José is the largest city to adopt such an ordinance to date. The ordinance will be effective January 1, 2014 for multi-state restaurants.
- Post-2014:
 - The polystyrene phase-out ordinance will be effective January 1, 2015 for all remaining food service vendors in San José.
 - Ordinance evaluation and amendments as necessary.

Public Education and Outreach Programs

- Pre-MRP:
 - The City participates in the countywide Watershed Watch Campaign and the ZunZun youth education program. The Watershed Watch Campaign conducts media advertising that includes anti-litter messages. Anti-litter advertisements for television, print, transit, and radio have been developed and are used each year and will continue in the future. A telephone survey is conducted every five years to measure the effectiveness of outreach and increase in awareness about litter and stormwater related messaging. As part of

SCVURPPP, the City funds up to 50 ZunZun musical assemblies at elementary schools in the Santa Clara Valley each year. These bilingual musical assemblies educate elementary school students and their teachers on watersheds and urban runoff pollution prevention, including litter. ZunZun performances use physical comedy, audience participation and musical instruments to educate teachers and children. Handouts, including teacher and student activity sheets, are distributed following the assembly.

- Regionally the Santa Clara County Zero Litter Initiative is working with haulers to reduce litter from garbage collection and transportation.
- In addition to these regional efforts, the City leads local efforts such as the Creeks Come to Class Program and funds programs in partnership with the Don Edwards Environmental Education Center. In addition to these enhanced activities, the City also attends many public community outreach events where the anti-littering message is promoted.
- 2009 – 2014:
 - In FY 11-12, BASMAA began implementing the “Be the Street” anti-litter Youth Outreach Campaign. Be the Street takes a Community Based Social Marketing approach to encourage youth to keep their community clean. The intent of the campaign is to make “no-littering” the norm among the target audience (youth between the ages of 14 and 24). The campaign is using online social marketing tools to conduct outreach.
 - Additionally the City’s Clean Creeks, Healthy Communities (CCHC) program includes specific outreach and community surveys along a targeted length of Coyote Creek impacted by trash and illegal dumping. CCHC aims to reduce trash through addressing homelessness, community engagement, and illegal dumping prevention. The project represents a partnership of the City, EPA, Santa Clara Valley Water District, San José State University, and non-governmental agencies over a four year period. To date CCHC has participated in or organized 42 outreach events and reached an estimated 1,274 residents and students with their watershed protection and anti-litter messages. Surveys will offer specific metrics by which to measure program effectiveness. The first resident baseline survey was conducted in October 2011 and revealed 58% of residents are aware that their personal conduct can result in litter in Coyote Creek. The next survey, conducted in fall 2013, showed an increase in the number of residents aware that their actions can impact Coyote Creek.
 - The City and the San José Earthquakes will partner on a multi-faceted media campaign focused on several of the City’s environmental programs including zero waste and litter reduction.
- Post-2014:
 - Continuation of above programs.

Community Engagement – Schools

- Pre-MRP:
 - No control measures were implemented prior to the MRP.
- 2009 – 2014:
 - Develop a comprehensive anti-litter education and prevention program for all K-12 schools that will be integrated into a broader environmental education curriculum to be implemented in coordination with the Environmental Services Department, other City programs, and outside stakeholders.
 - Participation in the Schools/City Collaborative, a meeting of school Superintendents in Santa Clara County, to explore and develop trash reduction programs and projects.

- Post-2014:
 - A schools conference is planned for the first quarter of 2015. The conference includes presentations and resources to green schools and will include trash reduction information.
 - Potential expansion of above programs.

Urban Village Development

- Pre-MRP:
 - No control measures were implemented prior to the MRP.
- 2009 – 2014:
 - Coordinate with Planning, Building, and Code Enforcement to ensure that trash control measures are implemented in future urban village development.
- Post-2014:
 - Continuation of above program.
 - Determine feasibility of specific General Plan updates or development permit requirements that address litter reduction.

3.2.49 Creek and Shoreline Hot Spot Cleanups

The City of San José cleans 32 hot spots annually, as required by the MRP. All of these cleanup actions were initiated after MRP adoption. A summary of the City's hot spots, descriptions, and dominant pathways and sources is provided below in Table 7. The City has collected a 3 year aggregate total of 491 cubic yards. Hot Spot locations through FY12-13 are depicted throughout the figures in this Plan.

Table 7. City of San José Hot Spot details

Trash Hot Spot ID	Description	Trash Sources (where possible)
SJC01	Penitencia Creek at Piedmont Rd.	Litter, Illegal dumping, Outfall
SJC02	Coyote Creek at US101	Trash accumulation, Litter, Illegal dumping, Homeless encampments
SJC03	Coyote Creek at the confluence with Lower Silver Creek	Litter, Illegal dumping
SJC04	Lower Silver Creek, at east end of Plata Arroyo Park	Trash accumulation, Litter, Outfall
SJC05	Lower Silver Creek at Calle de Plata	Trash accumulation, Litter, Outfall
SJC06	Thompson Creek at the confluence with Quimby Creek	Litter, Outfall
SJC07	Coyote Creek at Santa Clara St.	Trash accumulation, Litter, Illegal dumping, Homeless encampments
SJC08	Coyote Creek at Roosevelt Park	Trash accumulation, Litter, Illegal dumping
SJC09	Coyote Creek upstream of E. William St.	Trash accumulation, Litter, Illegal dumping
SJC10	Coyote Creek at Story Rd.	Trash accumulation, Litter, Homeless encampments
SJC11	Coyote Creek at Kelley Park	Trash accumulation, Litter, Illegal dumping, Homeless encampments
SJC12	Coyote Creek at Phelan Ave.	Trash accumulation, Litter, Illegal dumping, Homeless encampments
SJC13	Coyote Creek at Singleton Rd.	Litter, Illegal dumping, Homeless

Trash Hot Spot ID	Description	Trash Sources (where possible)
		encampments, Outfall
SJC14a	Guadalupe River upstream of Skyport Dr.	Trash accumulation, Litter, Outfall
SJC14*	Coyote Creek downstream of O'Toole Ave.	Illegal dumping, Homeless encampments, Trash accumulation, Litter, Outfall
SJC15	Guadalupe River downstream of W. Hedding St.	Trash accumulation, Litter, Homeless encampments
SJC16	Guadalupe River upstream of Interstate 880	Trash accumulation, Litter
SJC17	Guadalupe River north of Coleman Ave. at flood channel pedestrian bridge	Litter, Illegal dumping, Homeless encampments
SJC18	Guadalupe River upstream of W. Taylor St.	Trash accumulation, Litter, Illegal dumping, Homeless encampments
SJC19	Guadalupe River downstream of W. Taylor St.	Trash accumulation, Litter, Illegal dumping, Homeless encampments
SJC20	Guadalupe River north of W. Taylor St at flood channel pedestrian bridge.	Trash accumulation, Litter, Illegal dumping
SJC21	Guadalupe River downstream of W. Hedding St.	Trash accumulation, Litter, Homeless encampments
SJC22	Guadalupe River at Coleman Ave.	Trash accumulation, Litter, Illegal dumping, Homeless encampments
SJC23	Los Gatos Creek at W. Santa Clara St.	Trash accumulation, Litter, Illegal dumping, Homeless encampments
SJC24	Guadalupe River at the confluence with Los Gatos Creek	Trash accumulation, Litter, Illegal dumping, Homeless encampments
SJC25a	Guadalupe River downstream of Skyport Dr.	Trash accumulation, Litter, Homeless encampments, Outfall
SJC25*	Guadalupe River at W. Julian St.	Trash accumulation, Litter, Illegal dumping, Homeless encampments, Outfall
SJC26	Guadalupe River at W. San Carlos St.	Trash accumulation, Litter, Homeless encampments
SJC27	Guadalupe River upstream of Woz Way to Interstate 280	Trash accumulation, Litter, Illegal dumping, Outfall
SJC28	Guadalupe River at Discovery Meadow	Trash accumulation, Litter, Illegal dumping, Homeless encampments
SJC29	Guadalupe River downstream of Woz Way	Trash accumulation, Litter, Illegal dumping, Homeless encampments
SJC30	Guadalupe River at W. Virginia St.	Litter, Illegal dumping, Homeless encampments, Outfall
SJC31	Guadalupe River at W. Alma Ave.	Litter, Illegal dumping, Homeless encampments, Outfall
SJC32	New Chicago Marsh at Spreckles Ave.	Trash accumulation, Illegal dumping, Litter
* This site location was changed during FY 11- 12 due to safety issues.		

3.3 Control Measure Implementation Schedule

Table 8 provides an overview of trash reduction program implementation. As San José's TMAs are further assessed additional programs will be added and reported on via San José's annual reporting process.

Table 8. City of San José trash control measure implementation schedule

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	FY 2014-2015	FY 2015-2016	FY 2016-2017 ^b	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022 ^c
TMA #1														
Full-Capture Treatment Devices					X	X	X	X	X	X	X	X	X	X
Improved Trash Bins/Container Management	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TMA #2														
Full-Capture Treatment Devices					X	X	X	X	X	X	X	X	X	X
Street Sweeping		X	X	X	X	X	X	X	X	X	X	X	X	X
TMA #3														
Full-Capture Treatment Devices					X	X	X	X	X	X	X	X	X	X
TMA #4														
Full-Capture Treatment Devices				X	X	X	X	X	X	X	X	X	X	X
Street Sweeping		X	X	X	X	X	X	X	X	X	X	X	X	X
Community Engagement – Anti-Gang & Blight Interdepartmental Coordination						X								
On-land Trash Cleanups		X	X	X	X	X	X							
TMA #5														
Full-Capture Treatment Devices		X	X	X	X	X	X	X	X	X	X	X	X	X
Street Sweeping		X	X	X	X	X	X	X	X	X	X	X	X	X
TMA #6														
Full-Capture Treatment Devices			X	X	X	X	X	X	X	X	X	X	X	X
On-land Trash Cleanups		X	X	X	X	X	X							
TMA #7														
Full-Capture Treatment Devices					X	X	X	X	X	X	X	X	X	X

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	FY 2014-2015	FY 2015-2016	FY 2016-2017 ^b	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022 ^c
Street Sweeping		X	X	X	X	X	X	X	X	X	X	X	X	X
On-land Trash Cleanups		X	X	X	X	X	X							
Community Engagement – Anti-Gang & Blight Interdepartmental Coordination						X								
TMA #8 (8A, 8AR, 8B, 8CB, 8DA, 8E, 8J, 8LP, 8SC, 8SR, 8ST, 8W)														
Full-Capture Treatment Devices	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Improved Trash Bins/Container Management					X	X	X	X	X	X	X	X	X	X
Community Engagement: Clean Streets Pilot (8SR Only)							X	X						
TMA #9														
Full-Capture Treatment Devices	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Partial-Capture Treatment Devices						X	X	X	X	X	X	X	X	X
TMA #10														
Full-Capture Treatment Devices	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TMA #11														
Full-Capture Treatment Devices	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TMA #12														
Full-Capture Treatment Devices			X	X	X	X	X	X	X	X	X	X	X	X
Street Sweeping	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Community Engagement – Anti-Gang & Blight Interdepartmental Coordination						X								
TMA #13														
Community Engagement – Anti-Gang & Blight Interdepartmental Coordination						X								
TMA #14														
Improved Trash Bins/Container Management					X	X	X	X	X	X	X	X	X	X

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	FY 2014-2015	FY 2015-2016	FY 2016-2017 ^b	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022 ^c
Trash Management Areas A-AG listed below have been identified but have no control measures yet identified. Possible control measures appropriate for those areas are pending additional analysis and planning. The City will begin reporting out Trash Management Plans for these areas in 2014.														
TMA A														
On-land Trash Cleanups					X	X	X	X	X	X	X	X	X	X
Enhanced/New Control Measures							Implementation schedule to be determined (TBD)							
TMA B														
Enhanced/New Control Measures							Implementation schedule TBD							
TMA C														
Enhanced/New Control Measures							Implementation schedule TBD							
TMA D														
Enhanced/New Control Measures							Implementation schedule TBD							
TMA E														
Enhanced/New Control Measures							Implementation schedule TBD							
TMA F														
Full-Capture Treatment Devices			X	X	X	X	X	X	X	X	X	X	X	X
Enhanced/New Control Measures							Implementation schedule TBD							
TMA G														
Enhanced/New Control Measures							Implementation schedule TBD							
TMA H														
Full-Capture Treatment Devices			X	X	X	X	X	X	X	X	X	X	X	X
Enhanced/New Control Measures							Implementation schedule TBD							
TMA I														
Enhanced/New Control Measures							Implementation schedule TBD							

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	FY 2014-2015	FY 2015-2016	FY 2016-2017 ^b	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022 ^c
TMA J														
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA K														
Full-Capture Treatment Devices			X	X	X	X	X	X	X	X	X	X	X	X
Street Sweeping						X	X	X	X	X	X	X	X	X
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA L														
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA M														
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA N														
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA O														
Full-Capture Treatment Devices			X	X	X	X	X	X	X	X	X	X	X	X
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA P														
Full-Capture Treatment Devices			X	X	X	X	X	X	X	X	X	X	X	X
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA Q														
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA R														
Street Sweeping						X	X	X	X	X	X	X	X	X
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA S														

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	FY 2014-2015	FY 2015-2016	FY 2016-2017 ^b	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022 ^c
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA T														
Full-Capture Treatment Devices			X	X	X	X	X	X	X	X	X	X	X	X
Street Sweeping						X	X	X	X	X	X	X	X	X
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA U														
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA V														
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA W														
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA X														
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA Y														
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA Z														
Full-Capture Treatment Devices			X	X	X	X	X	X	X	X	X	X	X	X
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA AA														
Full-Capture Treatment Devices	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Street Sweeping						X	X	X	X	X	X	X	X	X
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA AB														
Full-Capture Treatment Devices	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	FY 2014-2015	FY 2015-2016	FY 2016-2017 ^b	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022 ^c
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA AC														
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA AD														
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA AE														
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA AF														
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
TMA AG														
Full-Capture Treatment Devices			X	X	X	X	X	X	X	X	X	X	X	X
<i>Enhanced/New Control Measures</i>							Implementation schedule TBD							
Jurisdiction-wide Control Measures														
Single-Use Carryout Bag Policies				X	X	X	X	X	X	X	X	X	X	X
Polystyrene Foam Food Service Ware Policies			X	X	X	X	X	X	X	X	X	X	X	X
Public Education and Outreach Programs	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Community Engagement: Schools							X	X	X	X	X	X	X	X
Urban Village Development							X	X	X	X	X	X	X	X
Creek and Shoreline Hot Spot Cleanups		X	X	X	X	X	X	X	X	X	X	X	X	X

^aJuly 1, 2014 40% trash reduction target^bJuly 1, 2017 70% trash reduction target^cJuly 1, 2022 100% trash reduction target

4.0 PROGRESS ASSESSMENT STRATEGY

Provision C.10.a.ii of the MRP requires Permittees to develop and implement a trash load reduction tracking method that will be used to account for trash load reduction actions and to demonstrate progress and attainment of trash load reduction targets. Early into the MRP, Permittees decided to work collaboratively to develop a trash load reduction tracking method through the Bay Area Stormwater Management Agencies Association (BASMAA). Permittees, Water Board staff and other stakeholders assisted in developing Version 1.0 of the tracking method. On behalf of all MRP Permittees, the Bay Area Stormwater Management Agencies Association (BASMAA) submitted Version 1.0 to the Water Board on February 1, 2012.

The Trash Assessment Strategy (Strategy) described in this section is intended to serve as Version 2.0 of the trash tracking method and replace Version 1.0 previously submitted to the Water Board. The Strategy is specific to Permittees participating in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) including the City of San José. The City intends to implement the Strategy in phases and at multiple geographical scales (i.e., jurisdiction-wide and trash management area) in collaboration with SCVURPPP. Pilot implementation is scheduled for the near-term and as assessment methods are tested and refined, the Strategy will be adapted into a longer-term approach. The Strategy selected by the City is described in the following sections.

4.1 SCVURPPP Pilot Assessment Strategy

The following SCVURPPP Pilot Trash Assessment Strategy (SCVURPPP Pilot Strategy) was developed by SCVURPPP on behalf of the City and other Santa Clara Valley Permittees. The SCVURPPP Pilot Strategy will be implemented at a pilot scale on a countywide basis and includes measurements and observations in the City of San José.

4.1.1 Management Questions

The SCVURPPP Pilot Strategy is intended to answer the following core management questions over time as trash control measures outlined in Section 3.0 are implemented and refined:

- Are the MS4 trash load reduction targets being achieved?
- Have trash problems in receiving waters been resolved?
- If trash problems in receiving waters exist, what are the important sources and transport pathways?

The SCVURPPP Pilot Strategy, including indicators and methods, is summarized in this section and fully described in the SCVURPPP Pilot Trash Assessment Strategy, a compendium document submitted to the Water Board on February 1, 2014 on behalf of all SCVURPPP Permittees (SCVURPPP 2014).

4.1.2 Indicators of Progress and Success

The management questions listed in the previous section will be addressed by tracking information and collecting data needed to report on a set of key environmental indicators. Environmental indicators are simple measures that communicate what is happening in the environment. Since trash in the environment is very complex, indicators provide a more practical

and economical way to track the state of the environment than if we attempted to record every possible variable.

With regard to municipal stormwater trash management, indicators are intended to detect progress towards trash load reduction targets and solving trash problems. Ideally, indicators should be robust and able to detect progress that is attributable to multiple types of trash control measure implementation scenarios. Assessment results should also provide Permittees with an adequate level of confidence that trash load reductions from MS4s have occurred, while also assessing whether trash problems in receiving waters have been resolved. Indicators must also be cost effective, relatively easy to generate, and understandable to stakeholders.

Primary and secondary indicators that SCVURPPP Permittees will use to answer core management questions include:

Primary Indicators:

- 1-A Reduction in the level of trash present on-land and available to MS4s
- 1-B Effective full-capture device operation and maintenance

Secondary Indicators:

- 2-A Successful levels of trash control measures implementation
- 2-B Reductions in the amount of trash in receiving waters

In selecting the indicators above, the City of San José in collaboration with SCVURPPP and other SCVURPPP Permittees recognize that no one environmental indicator will provide the information necessary to effectively determine progress made in reducing trash discharged from MS4s and improvements in the level of trash in receiving waters. Multiple indicators were therefore selected.

The ultimate goal of municipal stormwater trash reduction strategies is to reduce the impacts of trash associated with MS4s on receiving waters. Indicators selected to assess progress towards this goal should ideally measure outcomes (e.g., reductions in trash discharged). The primary indicators selected by SCVURPPP are outcome-based and include those that are directly related to MS4 discharges. Secondary indicators are outcome or output-based and are intended to provide additional perspective on and evidence of successful trash control measure implementation and improvements in receiving water condition with regard to trash.

As described in Section 2.2, trash is transported to receiving waters from pathways other than MS4s, which may confound our ability to observe MS4-associated reductions in creeks and shorelines. Due to this challenge of linking MS4 control measure implementation to receiving water conditions, the receiving water based indicator is currently considered a secondary indicator. Evaluations of data on the amount of trash in receiving waters that are conducted over time through the Pilot Assessment Strategy will assist the City in further determinations of the important sources and pathways causing problems in local creeks, rivers, and shorelines.

4.1.3 Pilot Assessment Methods

This section briefly summarizes the preliminary assessment methods that the City of San José will implement through the SCVURPPP Pilot Strategy to generate the indicator information described in the previous section. Additional information on each method can be found in the

SCVURPPP Pilot Trash Assessment Strategy submitted to the Water Board by SCVURPPP on behalf of the City.

1-A. On-land Visual Assessments

As part of the Trash Generation Map assessment and refinement process (see Section 2.3.1), a draft on-land visual assessment method was developed to assist Permittees in confirming and refining trash generating area designations (e.g., very high, high, medium, and low trash generating categories). The draft on-land visual assessment method is intended to be a cost-effective tool and provide Permittees with a viable alternative to quantifying the level of trash discharged from MS4s. As part of BASMAA's *Tracking California's Trash* grant received from the State Water Resources Control Board (see Section 4.2), quantitative relationships between trash loading from MS4s and on-land visual assessment condition categories will be established. Condition categories defined in the draft on-land assessment protocol are listed in Table 9.

Table 9. Trash condition categories used in the draft on-land visual assessment protocol

Trash Condition Category	Summary Definition
A (Low)	Effectively no trash is observed in the assessment area.
B (Medium)	Predominantly free of trash except for a few pieces that are easily observed.
C (High)	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets.
D (Very High)	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of a lack of concern for litter in the area.

On-land visual assessments will be conducted in trash management areas within the City of San José as part of the SCVURPPP Pilot Trash Assessment Strategy. On-land assessments are intended to establish initial conditions and detect improvements in the level of trash available to MS4s over time. More specifically, on-land visual assessment methods will be conducted in areas not treated by trash full-capture devices in an attempt to evaluate reductions associated with other types of control measures. Assessment methods for areas treated by full-capture devices are described in this next section.

Given that the on-land assessment method and associated protocol have not been fully tested and refined, initial assessments will occur at a pilot scale in the City and in parallel to the *Tracking California's Trash* project. The frequency of assessments and number of sites where assessments will occur during the pilot stage are more fully described in the SCVURPPP Pilot Trash Assessment Strategy (SCVURPPP 2014).

1-B. Full-Capture Operation and Maintenance Verification

Consistent with the MRP, adequate inspection and maintenance of trash full-capture devices is required to maintain full-capture designation by the Water Board. The City of San José is currently developing an operation and maintenance verification program (Trash O&M Verification Program), via SCVURPPP, to ensure that devices are inspected and maintained at a level that maintains this designation.

The SCVURPPP Trash O&M Verification Program will be modeled on the current O&M verification program for implementing stormwater treatment controls consistent with the Permit's new and redevelopment requirements. Additional details regarding the Trash O&M Verification Program can be found in the SCVURPPP Pilot Trash Assessment Strategy (SCVURPPP 2014).

2-A. Control Measure Effectiveness Evaluations

In addition to on-land trash assessments and full-capture operation and maintenance verification, the City will also conduct assessments of trash control measures implemented within their jurisdictional area. Assessment methods will be selected based on trash sources and the type of control measure being implemented. Control measure effectiveness evaluations are more fully described in the SCVURPPP Pilot Trash Assessment Strategy. The following are example assessment methods that may be used to demonstrate successful control measure implementation and progress towards trash reduction targets:

- Product-related Ordinances – Annually tracking and reporting the percentage of businesses in compliance with the ordinance and the percentage requiring a response.
- Street Sweeping – Reporting the frequency of sweeping and ability to sweep to the curb in specific areas where enhanced sweeping is implemented; and/or documenting the level of trash on streets directly after street sweeping during wet and dry weather seasons.
- Public/Private Trash Container Management – Reporting the magnitude and extent of enhanced actions; and/or visually assessing and documenting conditions around public trash containers before and after implementing enhanced control measures.
- Targeted Outreach and Enforcement – Reporting the magnitude and extent of enhanced actions; tracking and reporting the % increase in enforcement actions; and/or visually assessing and documenting the conditions in targeted areas before and after implementing control measures.
- Public Outreach Campaigns – Reporting the magnitude and extent of enhanced actions; and/or conducting pre and post campaign surveys.
- On-land Cleanups and Enforcement – Reporting the magnitude and extent of enhanced actions; visually assessing and documenting the conditions in targeted areas before and after control measure implementation; and/or tracking the volumes of trash removed.
- Illegal Dumping Prevention – Reporting the magnitude and extent of enhanced actions; and/or tracking and reporting improvements in the number of incidents.
- Business Improvement Districts (BID) – Reporting the magnitude and extent of enhanced actions; and/or visually assessing and documenting the conditions in BID areas before and after implementing control measures.

- Prevention of Uncovered Loads - Reporting the magnitude and extent of enhanced actions; tracking and reporting the decreases in the number of incidents; and/or visually assessing and documenting the conditions in targeted areas before and after implementing control measures.
- Partial-Capture Devices – Reporting the magnitude and extent of enhanced actions; and/or visually assessing and the amount of trash in storm drains or downstream of partial-capture devices.

2-C. Receiving Water Condition Assessments

The ultimate goal of stormwater trash management in the Bay Area is to significantly reduce the amount of trash found in receiving waters. In the last decade, Santa Clara Valley Permittees and volunteers have collected data on the amounts of trash removed during cleanup events. More recently, Permittees have conducted trash assessments in creek and shoreline hotspots using standardized assessment methods. In an effort to answer the core management question *Have trash problems in receiving waters been resolved?*, the City of San José plans to continue conducting receiving water condition assessments at trash hot spots a minimum of one time per year. Assessment will be conducted consistent with Permit hot spot cleanup and assessment requirements. Additional information on receiving water assessment methods can be found in the SCVURPPP Pilot Trash Assessment Strategy (SCVURPPP 2014).

4.2 BASMAA “Tracking California’s Trash” Project

The SCVURPPP Pilot Assessment Strategy described in the previous section recognizes that the outcome-based trash assessment methods needed to assess progress toward trash reduction targets are not well established by the scientific community. In an effort to address these information gaps associated with trash assessment methods, the Bay Area Stormwater Management Agencies Association (BASMAA), in collaboration with SCVURPPP, the 5 Gyres Institute, San Francisco Estuary Partnership, the City of Los Angeles, and other stormwater programs in the Bay Area developed the *Tracking California’s Trash* Project (the Project). The Project is funded through a Proposition 84 grant awarded to BASMAA by the State Water Resources Control Board (SWRCB) who recognized the need for standardized trash assessment methods that are robust and cost-effective.

The Project is intended to assist BASMAA member agencies in testing trash assessment and monitoring methods needed to evaluate trash levels in receiving waters, establish control measures that have an equivalent performance to trash full-capture devices, and assess progress in trash reduction over time. The following sections provide brief descriptions of tasks that BASMAA will conduct via the three-year Project. Full descriptions of project scopes, deliverables, and outcomes will be developed as part of the task-specific Sampling and Analysis Plans required by the SWRCB during the beginning of the Project. The Project is currently underway and will continue through 2016.

4.2.1 Testing of Trash Monitoring Methods

BASMAA and the 5 Gyres Institute will evaluate the following two types of assessment methods as part of the Project:

- **Trash Flux Monitoring** – Trash flux monitoring is intended to quantify the amount of trash flowing in receiving waters under varying hydrological conditions. Flux monitoring will be tested in up to four receiving water bodies in San Francisco Bay and/or the Los Angeles areas. Methods selected for evaluation and monitoring will be based on a literature review conducted during this task and through input from technical advisors and stakeholders. Monitoring is scheduled to begin in 2014 and will be completed in 2016.
- **On-land Visual Assessments** – As part of the Project, BASMAA will also conduct an evaluation of the on-land visual assessment methods that are included in the SCVURPPP Pilot Assessment Strategy. The methods are designed to determine the level of trash on streets and public right-of-ways that may be transported to receiving waters via MS4s. BASMAA plans to conduct field work associated with the evaluation of on-land visual assessment at a number of sites throughout the region. To the extent practical, sites where the on-land methods evaluations take place will be coordinated with trash flux monitoring in receiving waters. On-land assessments will occur in areas that drain to trash full-capture devices, and all sites will be assessed during wet and dry weather seasons in order to evaluate on-land methods during varying hydrologic conditions. Monitoring is scheduled to begin in 2014 and will be completed in 2016.

4.2.2 Full-Capture Equivalent Studies

Through the implementation of BASMAA's *Tracking California's Trash* grant-funded project, a small set of "Full-Capture Equivalent" projects will also be conducted in an attempt to demonstrate that specific combinations of control measures will reduce trash to a level equivalent to full-capture devices. Initial best management practices (BMP) combinations include high-frequency street sweeping and street sweeping with "No Parking" signage with auto-retractable curb inlet screens. Other combinations will also be considered. Studies are scheduled to begin in 2014 and will be completed in 2016.

4.3 Additional Progress Assessments

The City of San José will be conducting a needs assessment to ascertain added value of assessments beyond those methods described above. Any additional proposed assessment methods and timelines will be reported via the City's annual reporting process.

4.4 Long-Term Assessment Strategy

The City of San José is committed to implementing standardized assessment methods post-2016 based on the lessons learned from pilot assessments and studies that will occur between 2014 and 2016. Assessment activities described in the previous sections will evaluate the utility of different assessment methods to demonstrate progress towards trash reduction targets and provide recommended approaches for long-term implementation. Lessons learned will be submitted to the Water Board with the FY 15-16 Annual Report and a revised Strategy will be developed and submitted if necessary. The revised Strategy will include agreed upon assessment methods that will be used to demonstrate progress during the remaining term of

trash reduction requirements. Reporting using the new/revised methods will begin with the FY 16-17 Annual Report.

4.5 Implementation Schedule

The implementation schedule for the SCVURPPP Pilot Implementation Strategy, BASMAA's Tracking California's Trash project, and the Long-Term Assessment Strategy are included in Table 10. Load reduction reporting milestones are also denoted in the table. The schedule is consistent with the need for near-term pilot assessment results to demonstrate progress toward short-term targets, while acknowledging the need for testing and evaluation of assessment methods and protocols prior to long-term implementation. For more detailed information on implementation timelines, refer to the SCVURPPP Pilot Trash Assessment Strategy (SCVURPPP 2014) and monitoring plans developed as part of BASMAA's Tracking California's Trash Project.

Table 10. City of San José trash progress assessment implementation schedule

Trash Assessment Programs and Methods	Prior to FY 2013-14	Fiscal Year								
		2013-14 ^a	2014-15	2015-16	2016-17 ^b	2017-18	2018-19	2019-20	2020-21	2021-22 ^c
Pilot Trash Assessment Strategy (SCVURPPP)										
On-land Visual Assessments										
Initial (Baseline) Assessments	X									
Pilot Progress Assessments		X	X	X	X					
Full-Capture Operation and Maintenance Verification			X	X	X					
Control Measure Effectiveness Evaluations	X	X	X	X	X					
Receiving Water Condition Assessments	X	X	X	X	X					
Tracking California’s Trash Project (BASMAA)										
Testing of Trash Monitoring Methods										
Trash Flux Monitoring Protocol Testing			X	X	X					
On-land Visual Assessment Evaluations			X	X	X					
Full-Capture Equivalent Studies			X	X	X					
Long-Term Trash Assessment Strategy (SCVURPPP)						X	X	X	X	X

^aJuly 1, 2014 40% trash reduction target

^bJuly 1, 2017 70% trash reduction target

^cJuly 1, 2022 100% trash reduction target

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Appendix A

COUNCIL AGENDA: 1/14/14
ITEM: 7.1



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Kerrie Romanow

SUBJECT: SEE BELOW

DATE: January 6, 2014

Approved

Date

1/7/14

SUPPLEMENTAL

**SUBJECT: CLEAN WATERWAYS, HEALTHY CITY: LONG-TERM TRASH LOAD
REDUCTION PLAN**

REASON FOR SUPPLEMENTAL

To transmit the final updated draft of the Long-Term Trash Load Reduction Plan for Council certification and approval to submit to the San Francisco Bay Regional Water Quality Control Board in conformance with Stormwater Permit requirements; and to change the recommendation to reflect the request for Council direction.

RECOMMENDATION

Authorize submittal of the City's Long-Term Trash Load Reduction Plan to the San Francisco Bay Regional Water Quality Control Board in conformance with the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (Stormwater Permit) requirement, pursuant to the Federal Clean Water Act.

ANALYSIS

On December 2, 2013, the Transportation and Environment Committee received a report describing the approach, priorities, and trash reduction actions to be included in the Long-Term Trash Load Reduction Plan. Due to the timing of the Long-Term Trash Load Reduction Plan development, the final draft of the plan was not available for publication with the Transportation and Environment Committee Report. Staff sought feedback from the Committee on the development of the plan. Since this meeting, staff has updated the plan to incorporate the feedback provided by the Committee. Now, the final updated draft is being provided to Council for review and approval which necessitates the change in the Recommendation language.

HONORABLE MAYOR AND CITY COUNCIL

January 6, 2014

Subject: Clean Waterways, Healthy City: Long-Term Trash Load Reduction Plan

Page 2

This document fulfills the Stormwater Permit requirement to submit a Long-Term Trash Load Reduction Plan outlining measures to attain the currently specified trash load reduction goals of 70% by 2017, and 100% by 2022. In addition to complying with the Stormwater Permit, the benefits of the strategies outlined in the Plan will help keep litter out of our waterways, keep the SF Bay clean, minimize harm to wildlife, and ultimately improve the quality of life for San Jose's residents. The complete *Clean Waterways, Healthy City: Long-Term Trash Load Reduction Plan* is available on the City website at <http://www.sanjoseca.gov/DocumentCenter/View/25333>¹

COORDINATION

The Long-Term Trash Load Reduction Plan was developed by the Environmental Services Department in coordination with the departments of Planning, Building and Code Enforcement; Public Works; Transportation; Parks, Recreation and Neighborhood Services; and the City Attorney's Office.

/s/ Ashwini Kantak for
KERRIE ROMANOW
Director, Environmental Services

For questions please contact Napp Fukuda, Deputy Director, at (408) 793-5353.

¹ All documents referenced as web links are also available for review in the City Clerk's Office or the Environmental Services Department. To find a report at the website, select the Council date and item number.

Appendix B

T&E AGENDA: 12/02/13
ITEM: D(5) 4*Memorandum***TO:** TRANSPORTATION AND
ENVIRONMENT COMMITTEE**FROM:** Kerrie Romanow**SUBJECT:** SEE BELOW**DATE:** November 13, 2013

Approved

Date

11/20/13

**SUBJECT: CLEAN WATERWAYS, HEALTHY CITY: LONG-TERM TRASH LOAD
REDUCTION PLAN****RECOMMENDATION**

1. Accept staff report on the development of the City's Long-Term Trash Load Reduction Plan; and
2. Provide input to staff on the proposed approach, priorities, and trash reduction actions to be included in the City's final Long-Term Trash Load Reduction Plan to be presented for Council consideration on January 14, 2014.

OUTCOME

This report will inform the Committee on current and proposed trash reduction efforts that will result in cleaner waterways and a healthier City; continued environmental leadership by the City; and compliance with the requirements of the Stormwater Permit.

EXECUTIVE SUMMARY

In 2009, The San Francisco Bay Regional Water Quality Control Board (Water Board) initiated more stringent regulation of trash as a pollutant under the Federal Clean Water Act. The City's storm sewer system is regulated under the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (Order R2 2009 0074) (Stormwater Permit) issued by the Water Board. The Stormwater Permit specifies actions necessary to reduce the discharge of pollutants, including trash, into the municipal storm sewer system to protect local creeks and the Bay, and requires all Permittees to reduce trash loading to the storm sewer system by 40 percent by 2014, 70 percent by 2017, and 100 percent by 2022. Each Permittee was required to submit a Short-Term Trash Load Reduction Plan by February 1, 2012, to document how the 2014 trash reduction goal would be met. Additionally, a Long-Term Trash Load Reduction Plan documenting how the City intends to meet the more challenging 2017 and 2022 trash reduction goals must be submitted to the Water Board by February 1, 2014.

TRANSPORTATION AND ENVIRONMENT COMMITTEE

11/13/13

Subject: Long-Term Trash Reduction Plan

Page 2

The Short and Long-Term Trash Load Reduction Plans provide a roadmap to help San José achieve the vision of Clean Waterways, Healthy City because reviving our creeks is core to improving the health of our communities. Urban creeks provide open space for residents and many of the City's most prominent parks are located along riparian corridors. As the City fills with urban villages and denser development, these riparian open spaces will become indispensable resources for the health of our communities. Denser living requires well planned, safe, clean spaces for people to gather, exercise, and share in community. The current state of many of our creeks has been significantly degraded by trash and neglect. Any vision of vibrant and healthy communities in San José must include revitalized waterways that will support a healthier lifestyle for our City.

Based on the tracking methodology described in the Short-Term Trash Load Reduction Plan, the City estimated a 57.2 percent trash reduction from its estimated 2009 baseload by 2014. Though the assessment methodology used to calculate this credit was approved by the Bay Area Stormwater Management Agencies Association (BASMAA), it was not accepted by the Water Board. Over the past year, Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) has worked closely with Water Board staff to identify an acceptable alternative method for tracking and assessing progress that is more focused on field observations, outcomes, and trash generation data collected as part of the original assessment methodology. The City and other co-permittees will pilot test the new methodology over the next 1-2 years as part of the Long-Term Trash Load Reduction Plan.

Environmental Services Department (ESD) has identified a total of 47 trash management areas (TMAs) encompassing the entire City. Trash control measures are and will continue to be focused on areas with very high, high, and moderate trash generation.

The City has made significant progress executing its Short-Term Trash Load Reduction Plan by introducing several trash control measures including, adoption of Citywide bag ban and polystyrene food ware phase-out ordinances; installation of nine in-ground hydrodynamic separator (HDS) units; enhancement of street sweeping, and launching community engagement programs. All of these programs have been planned or are currently being pilot tested or implemented in a subset of the City's TMAs.

Recognizing the diversity of economics, demographics, and land uses represented by the various TMAs, ESD must customize the trash control measure programming for each TMA based on established criteria. Trash control measures will be selected for each TMA from the menu of actions included in the Short-Term Trash Load Reduction Plan and new measures described in this memorandum. In order to select the most appropriate trash control measures, staff will conduct further detailed field assessments and evaluation.

Staff proposes the following approach and content for the Long-Term Trash Load Reduction Plan:

- Identification and assessment of TMAs
- Identification of appropriate trash control measures for each TMA
- Implementation of trash control measures

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11/13/13

Subject: Long-Term Trash Reduction Plan

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- Assessment of trash control measures
- Ongoing adaptive management of trash reduction strategies

This report provides a status update on implementation of the Short-Term Trash Load Reduction Plan and further details the approach and content proposed to be included in the Long-Term Trash Load Reduction Plan.

BACKGROUND

Due to water quality impacts, trash in waterways has become a priority concern to the public, municipalities, and water quality regulators. Several local waterways have been formally designated as "impaired by trash" under the Federal Clean Water Act. These waterways include Silver Creek, Coyote Creek, Saratoga Creek, San Tomas Aquino Creek, the Guadalupe River, and the lower San Francisco Bay shoreline. Water quality regulators regard stormwater as the largest uncontrolled source of pollutants to creeks and the Bay, and trash has emerged as a critical pollutant impacting waterways. Trash in its many forms, including but not limited to litter or illegal dumping, has become a significant issue for communities throughout the Bay Area. Table 1 summarizes the various trash sources and pathways to the creek.



Table 1: Trash Sources and Pathways

<u>Causes of Trash</u>	<u>Methods of Movement to Creek</u>
Pedestrians	Storm Sewer Systems
Vehicles	Wind Transport
Inadequate Waste Container Management	Direct Disposal into a Creek
Illegal Dumping	Downstream Transport to an Accumulation Point

The Stormwater Permit specifies actions necessary to reduce the discharge of pollutants, including trash, into stormwater to the maximum extent practicable and effectively prohibit non-stormwater discharges into the municipal storm sewer system to protect local creeks and the Bay. This Stormwater Permit regulates 76 municipalities, counties, and flood control agencies in the San Francisco Bay Region, and specifically requires all of these "Permittees" to implement measures to reduce trash loads from storm sewer systems by 40 percent by July 1, 2014, 70 percent by 2017, and 100 percent by 2022. To comply with these load reduction requirements, Permittees are required to determine how much trash is conveyed through the storm sewer system to creeks and waterways; implement actions to reduce that trash; and document trash reductions are achieved.

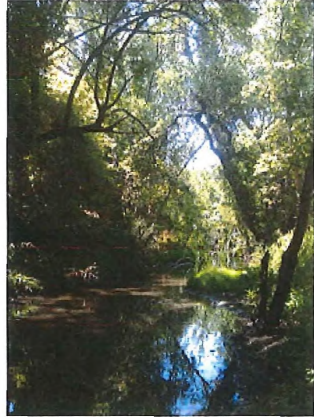
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The Short and Long-Term Trash Load Reduction Plans provide a roadmap to help San José achieve the vision of Clean Waterways, Healthy City because reviving our creeks is core to improving the health of our communities. Urban creeks provide open space for residents and many of the City's most prominent parks are located along riparian corridors. As the City fills with urban villages and denser development, these riparian open spaces will become indispensable resources for the health of our communities. Denser living requires well planned, safe, clean spaces for people to gather, exercise, and share in community. The current state of many of our creeks has been significantly degraded by trash and neglect. Any vision of vibrant and healthy communities in San José must include revitalized waterways that will support a healthier lifestyle for our City.



Baseline trash levels were determined through a regional effort coordinated through BASMAA. In 2011, BASMAA consultant, Cascadia Consulting Group, sorted and measured trash and debris from more than 160 storm drain inlets that had been outfitted with full trash capture devices from a cross sampling of land uses across the Bay Area. Many of these sampling sites were located in the South Bay, specifically in San José and Sunnyvale. This data was used in the determination of the City's Baseline Trash Load and in quantifying trash load reductions that would result from specific trash reduction measures such as street sweeping program improvements and structural trash controls. In general, the trash control actions implemented before the Stormwater Permit effective date of December 1, 2009, were considered part of the baseline trash load. The estimated 2009 baseline trash load for the City is approximately 972 cubic yards per year. This is comparable to the volume of 24 neighborhood cleanup dumpsters full of trash entering the storm sewer system and creeks on an annual basis. San Jose generates the greatest total trash load volume of all Bay Area cities, but has among the lowest per capita trash load generation rates in the Bay Area.

The Short-Term Trash Load Reduction Plan was approved by Council in January 2012 and submitted to the Water Board in February 2012, as required by the Stormwater Permit. The [Short-Term Trash Load Reduction Plan](#) included the baseline trash load estimate, described control measures and best management practices that would be implemented to attain a 40 percent trash load reduction from its Municipal Separate Storm Sewer System (MS4) by July 1, 2014; and explained the trash load reduction tracking methodology that would be used to account for trash load actions and demonstrate progress and attainment of trash load reduction measures. Based on the tracking methodology described in the plan, the City claimed a 57.2 percent trash reduction from its estimated baseload by 2014. Though the tracking methodology utilized for this credit was approved by BASMAA, the Water Board did not accept it. Over the past year, BASMAA has worked closely with Water Board staff to identify an acceptable alternative method for tracking and assessing progress.

A Long-Term Trash Load Reduction Plan documenting how the City intends to meet the more challenging 2017 and 2022 trash reduction goals must be submitted to the Water Board by February 1, 2014. This Plan is intended to provide an update on current trash reduction efforts

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and to present the City's plans to implement additional actions to reach the ultimate trash reduction goal. The same guiding principles used to develop the Short-Term Trash Load Reduction Plan were applied to the development of the Long-Term Trash Load Reduction Plan. These Principles align with the City's efforts to meet the regulatory targets with other City priorities:

- Achieve demonstrable progress toward the goals for reducing trash loading to waterways;
- Balance cost and effectiveness;
- Support community objectives for improving the quality of life in our neighborhoods;
- Support achievement of other water quality and environmental objectives; and
- Leverage resources and approaches with new and existing partners.

Achieving significant trash reduction will require a coordinated Citywide effort. The Short and Long-Term Trash Load Reduction Plans are heavily dependent upon expanding partnerships and interdepartmental collaboration among Environmental Services, Public Works, Transportation, Planning Building and Code Enforcement, and Parks, Recreation and Neighborhood Services, and the Office of Economic Development, among others. In addition, success in reducing trash is also contingent upon the continued development of partnerships with outside public agencies and community stakeholders.

This report will provide a status update on implementation of the Short Term-Trash Load Reduction Plan and propose preliminary plans for a Long-Term Trash Load Reduction Plan and Assessment strategy.

ANALYSIS

San José's long-term plan to reduce trash and meet requirements of the Stormwater Permit is based upon the following five point strategy:

- Identification and assessment of TMAs
- Identification of appropriate trash control measures for each TMA
- Implementation of trash control measures
- Assessment of trash control measures
- Ongoing adaptive management trash reduction strategies

The framework for developing Long-Term Trash Load Reduction Plans was developed by Permittees, SCVURPPP, and other Bay Area countywide stormwater program staff, in collaboration with Water Board staff.

Scope and Complexity of the Trash Problem in the City

The City encompasses a jurisdictional area of 114,511 acres, a population of 945,942, according to the 2010 Census, a population density of 5,256.2 people per square mile, and average household size of 3.09. The population is comprised of 24.8 percent people under the age of 18, 9.5 percent between 18 and 24, 31.1 percent are between 25 and 47, 24.5 percent are between 45 and 65, and 10.1 percent are 65 or older. The City has a variety of land uses including a mixture

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of high and low density residential; rural residential, industrial, retail, and urban parks. The City's size, variety of land uses, and median income levels magnify the scope of work required to plan and successfully deploy trash control measures that meet the varying needs of each community.

Additionally, trash generation levels vary throughout the City as summarized in the table below and can vary within a single community. See the table below for a breakdown of Citywide trash generation rates:

Trash Generation Levels	Percentage of Area
Very High	.7
High	5.6
Moderate	25.9
Low	67.8

The City's broad diversity is reflected in each of the TMAs, preventing a one size fits all approach and adding complexity to developing a Long-Term Trash Load Reduction Plan. It also demands more detailed analysis to determine and implement the best trash management approach for each unique area of the City.

Identification and Assessment Trash Management Areas and Trash Sources

The first step in the Long-Term Trash Load Reduction Plan framework requires Permittees to identify very high, high, moderate, and low trash generating areas within their jurisdictions. Trash generation rates developed through the aforementioned BASMAA regional study were used as a starting point for differentiating and delineating land areas with varying levels of trash generation. Permittees used local knowledge and field and/or desktop assessments to confirm and refine the level of trash generation for specific areas.

ESD has identified 47 TMAs for San José which capture all very high, high, and moderate trash generation areas (See Attachment A – Trash Management Area Maps). Trash reduction efforts will be concentrated in areas with concentrations on very high, high, and moderate levels of trash generation. These TMAs were identified in two phases. The initial TMAs were developed through a multi-step process that began with review of the BASMAA trash generation maps. Staff identified areas of the maps that most obviously conflicted with existing knowledge of litter generation in select neighborhoods and then conducted field assessments to confirm the trash generation levels in these areas. Some of these areas will require additional on-site assessment due to the complexity of land uses and other variables that effect trash generation. ESD delineated the initial 14 TMAs based on high and medium trash generation areas in which trash control measure pilots had previously been implemented or programmed to meet Stormwater Permit requirements. These trash control measures include in-ground hydrodynamic separator (HDS) units, enhanced street sweeping, and community engagement, litter prevention, and enforcement. See Attachment B – Trash Management Area Summary for a description of each TMA.

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The additional 33 TMAs were delineated primarily based on trash generation levels (very high, high, and moderate), natural boundaries, and classifications (i.e., land uses). The TMAs are generally contiguous geographical areas. In some instances, TMAs are classified by type, resulting in non-contiguous areas. Schools, retail business centers, parks, proposed urban villages are examples of this classification-based trash management area scheme. The classification-based areas are located in pockets throughout the City.

Short-Term Trash Load Reduction Plan Control Measures & Implementation Status

The City's has made significant progress with the implementation of its Short-Term Trash Load Reduction Plan. Trash reduction efforts to date include the following:

Table 2: Short-Term Trash Control Measures

Trash Control Measure	Description
Single Use Carryout Bag Ban Ordinance	In January 2012, the City implemented a Single-Use Carryout Bag Ban Ordinance becoming the largest city in the state to ban plastic carryout bags. There has been extensive outreach to the community in multiple languages. This control measure has been implemented City wide and is not specific to any TMA.
Expanded Polystyrene Food Ware Phase-Out Ordinance	In September 2013, Council approved an ordinance to phase-out the use of polystyrene food ware in restaurants. There has been extensive outreach to the community in multiple languages. San José is the largest city to adopt such an ordinance to date. This control measure has been implemented City wide and is not specific to any TMA.
Clean up of 32 Hotspots	Completed annual cleanup of all 32 hot spots to a level of "no visible impact" from trash; removing a 3 year aggregate total of 450 cubic yards.
Post MRP Enhanced Street Sweeping	The City has implemented an additional 40 curb miles of restricted parking to enhance street sweeper performance in areas identified to have "high" and "medium" trash loading.
Installation of HDS - Full Trash Capture Devices	Installation of nine hydrodynamic separator (HDS) systems that fully capture trash in the City's storm drain system for 1,272 acres of the City, 42 percent more area than required by the MRP's 895 acre full trash capture requirement for San José. While the City received a federal ARRA grant of \$687,000, the total cost of this project was \$2.8 million. The balance was paid by the City of San José Stormwater Fund.
Partial-Capture Devices	The City is considering a pilot utilizing automatic retractable screens (ARS) in FY 13-14. The pilot would include approximately one hundred inlets in a neighborhood adjacent to a high trash loading area. For this pilot, ESD would select a neighborhood and surrounding streets that already have parking restrictions and enforcement in place for street sweeping. Implementation is contingent upon further analysis of the effectiveness of ARS.

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Community Engagement - Clean Creeks Healthy Communities Project	Clean Creeks, Healthy Communities is an integrated, multi-disciplinary, four year project aimed at preventing trash pollution in Coyote Creek that results from littering, illegal dumping, and homeless encampments. The goals of this project is to engage the community to clean the Coyote Creek and corridor; deter trash generating behaviors through passive and active monitoring; and promote greater engagement by the community with their local creek by working to increase the number of residents engaged in creek stewardship activities.
Community Engagement - Anti-Litter Program	The City has an on-going Anti-Litter Program that recruits and supplies volunteers to remove litter from City streets and neighborhoods. The Anti-Litter program organizes volunteer groups for one day events and individuals to adopt litter hot spots or clean their neighborhood on an on-going basis. The Great American Litter Pick-Up is an annual volunteer event organized in coordination with the City's on-going Anti-Litter Program and completed through volunteer engagement in each of the 10 City Council districts.
Community Engagement - Volunteer Creek Cleanups	Volunteer creek cleanups are conducted twice per year in connection with California Coastal Cleanup Up Day and the National River Cleanup Day. The City hosts clean-up sites in San José for both events. Since the effective date of the current Stormwater Permit these events have removed an aggregate total of 138 tons from local waterways.

The City's trash management efforts and accomplishments to date have placed the City in a leadership position among Bay Area cities. Though the short-term trash reduction planning process was not accepted by the Water Board, the City has met or exceeded compliance with the trash related provisions of the Stormwater Permit. ESD continues to seek opportunities to work with internal and external stakeholders that share our goal of improving environmental, aesthetic, and health conditions of our communities.

Long-Term Trash Load Reduction Plan

To develop the Long-Term Trash Load Reduction Plan, ESD staff will employ a set of criteria for the prioritization of programming actions in TMAs in order to make the most efficient use of the City's resources and to ensure the greatest improvement in areas of the City most significantly burdened by trash. These criteria are as follows:

- Application of the best available data to identify areas of the City that continue to be especially burdened by trash;
- Implementation of trash reduction measures in areas where benefits can be optimized in relation to costs;
- Ability to align appropriate control measures with specific locations; and
- Capability of leveraging existing resources to maximize expected outcomes.

As described earlier, the City has identified 47 unique TMAs based on data and field study. Recognizing the diversity of economics, demographics, and land use represented by the various TMAs, ESD must customize the trash control measure programming for each area. ESD plans to

TRANSPORTATION AND ENVIRONMENT COMMITTEE

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apply the criteria described above to each TMA and assign trash control measures included in the Short-Term Trash Load Reduction Plan as well as new trash control measures such as those listed in Table 3 below. In order to select the most appropriate trash control measures for each unique TMA, staff will need to conduct further detailed field assessments and analysis. ESD will also collect data from the City's Short-Term Trash Load Reduction Plan trash control measure pilot programs, and leverage the pilot programs of other jurisdictions.

Table 3: Proposed New Long-Term Trash Control Measures

Trash Control Measure	Description
Community Engagement - Clean Streets Project	A pilot business engagement program intended to reduce trash and litter in Neighborhood Business Districts through targeted business engagement, outreach to the adjacent neighborhoods, and the addition of a new enforcement program that will be staffed by two existing City solid waste inspectors. The Clean Streets Project will also feature the services of the Downtown Streets Team to help the pilot project meet its goal of no litter remaining for more than 24 hours. The Clean Streets Project represents a multi-disciplinary approach to litter prevention. The first business district will be pilot-tested starting in FY 13-14.
Community Engagement - Anti-Gang & Blight Interdepartmental Coordination	ESD, PRNS, and Police Department will work together to leverage anti-gang resources to control blight and litter in gang hotspots throughout the City through community engagement and enforcement.
Community Engagement - Schools	Develop a comprehensive anti-litter education and prevention program for schools that will be integrated into a broader environmental education curriculum to be implemented in coordination with ESD, other City programs, and outside stakeholders.
Urban Village Development	Coordinate with Planning, Building, and Code Enforcement to ensure that trash control is considered in future urban village development.
Additional HDS - Full Trash Capture Devices	Installation of additional hydrodynamic separator (HDS) systems that fully capture trash in the City's storm drain system.
Public Litter Cans	ESD will coordinate with business districts to identify locations in need of public litter can placement and services to reduce litter accumulation on streets.

Assessment of Trash Load Reduction Strategy

The City of San José has been working closely with SCVURPPP co-permittees and Water Board staff to develop a new alternate tracking method to account for trash load reduction actions and track progress toward trash load reduction targets. This strategy is being implemented as a pilot on a county-wide basis. The pilot testing of these assessment tools will allow the City to gauge whether the control measures described in the Tables 2 and 3 above are effective. This pilot strategy is intended to test trash assessment and monitoring methods that will be needed in order to document progress toward the trash reduction requirements of the Stormwater Permit. The City will implement standardized assessment methods post 2016 based on the lessons learned from the pilot assessments and studies that will occur between 2014 -2016.

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Ongoing Adaptive Management Approach

An adaptive management approach will be utilized to ensure that the City can modify or course correct its strategies for trash reduction as we gain more experience and collect additional data. ESD has only developed preliminary plans for most TMAs which will require further refinement through an iterative process.

The current Stormwater Permit is set to expire at the end of 2014, but may be extended by the Water Board as the terms of the next Stormwater Permit, known as MRP 2.0, have yet to be determined. While Permittees have initiated discussions regarding MRP 2.0 with the Water Board, we do not yet have specific information regarding any new requirements that will be included in that new permit. Any new requirements could lead to additions or amendments to the proposed long-term strategy. Due to this uncertainty we are investing time and resources into gathering data and pilot programs to be positioned to make choices in FY 14-15 or FY 15-16.

The Long-Term Trash Load Reduction Plan will continue to develop as we learn more about what is best for our City, and will ultimately include a complete set of actions that represent the best course of action for San José to achieve clean waterways and a healthy City, while also meeting regulatory requirements. Our success in improving our communities and environment will make San José an even better place to live, work, and play.

The Long-Term Trash Load Reduction Plan will state that the Council maintains discretion over the level of expenditures for trash control measures and service level implementation in accordance with the City's annual budget process, the City Charter, and the San José Municipal Code. Inclusion of a proposed action plan in the Long-Term Trash Load Reduction Plan does not obligate the City to implement it. Changes to the plan will be submitted to the Water Board annually as part of the Stormwater Permit annual reporting process.

EVALUATION AND FOLLOW-UP

Staff will present a recommended Long-Term Trash Load Reduction Plan to Council on January 14, 2014 that incorporates the feedback and direction of the Committee. Staff will update the T&E Committee on the trash reduction tracking and assessment methodology, following Water Board approval. Water Board approval of the pilot methodology is anticipated to occur within the next six months. Implementation status and progress toward meeting trash reduction goals will be reported semi-annually.

PUBLIC OUTREACH/INTEREST

This report does not meet any of the criteria listed below.

- ☐ **Criterion 1:** Requires Council action on the use of public funds equal to \$1,000,000 or greater. **(Required: Website Posting)**

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- ☐ **Criterion 2:** Adoption of a new or revised policy that may have implications for public health, safety, quality of life, or financial/economic vitality of the City. **(Required: E-mail and Website Posting)**
- ☐ **Criterion 3:** Consideration of proposed changes to service delivery, programs, staffing that may have impacts to community services and have been identified by staff, Council or a Community group that requires special outreach. **(Required: E-mail, Website Posting, Community Meetings, Notice in appropriate newspapers)**

COORDINATION

This report has been coordinated with the Departments of Public Works; Transportation; Parks, Recreation and Neighborhood Services; Planning, Building, and Code Enforcement; and Police, and the Office of Economic Development, the City Attorney's Office; and the City Manager's Budget Office.

COST IMPLICATIONS

The costs related to implementation of this plan will follow additional analysis. Staff will spend the next six to nine months pilot testing current trash management programming and analyzing the additional TMAs to determine the most appropriate trash control measures.

The Storm Sewer Operating Fund (Fund 446) will be the most significant source of funding for the City's Long-Term Trash Load Reduction Plan; however, some of the identified actions will require other sources of funding to implement.

CEQA

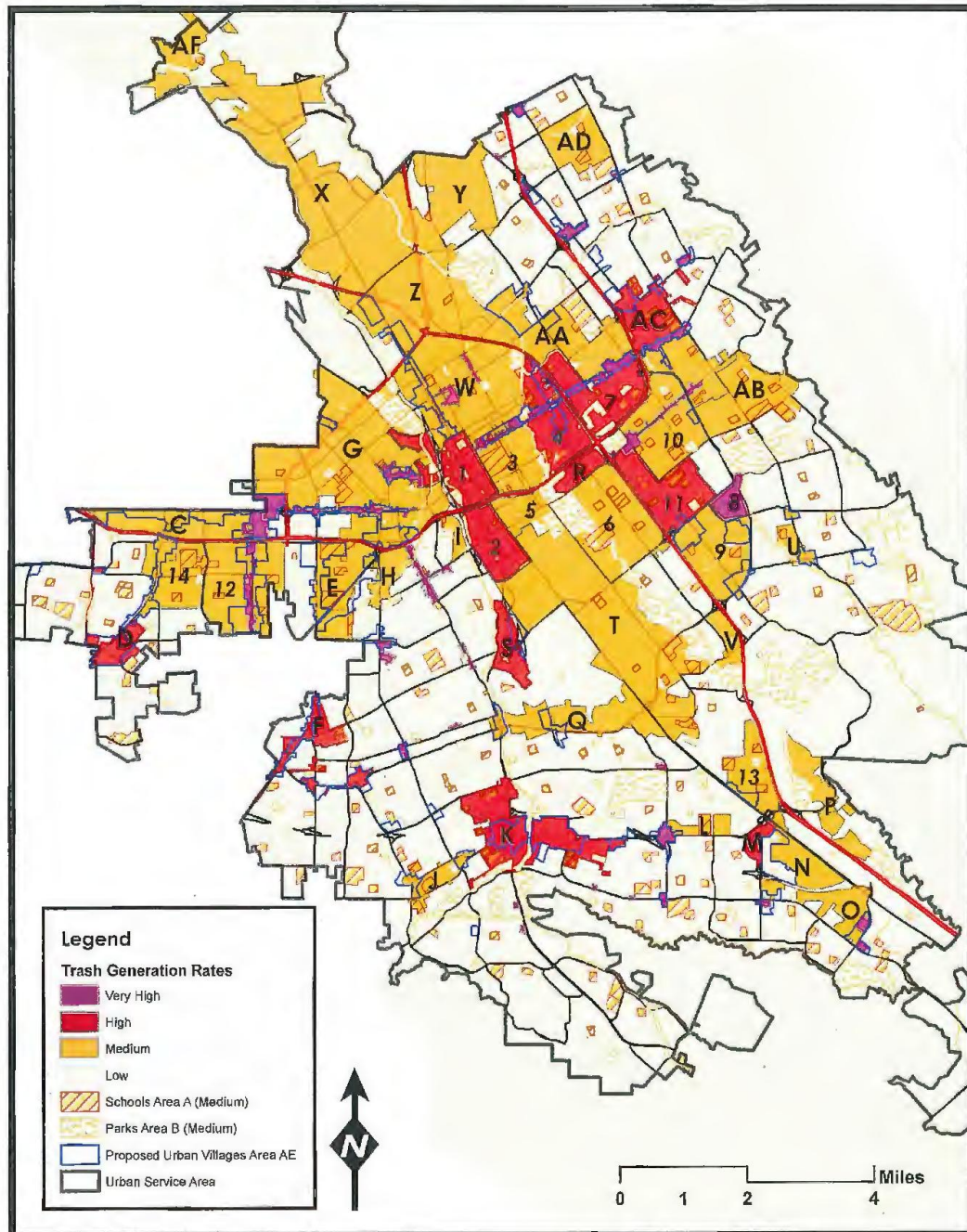
Not a Project, File Number PP10-069(a), staff reports.

/s/
KERRIE ROMANOW
Director, Environmental Services Department

Attachment A: Trash Management Area Maps
Attachment B: Trash Management Area Summary

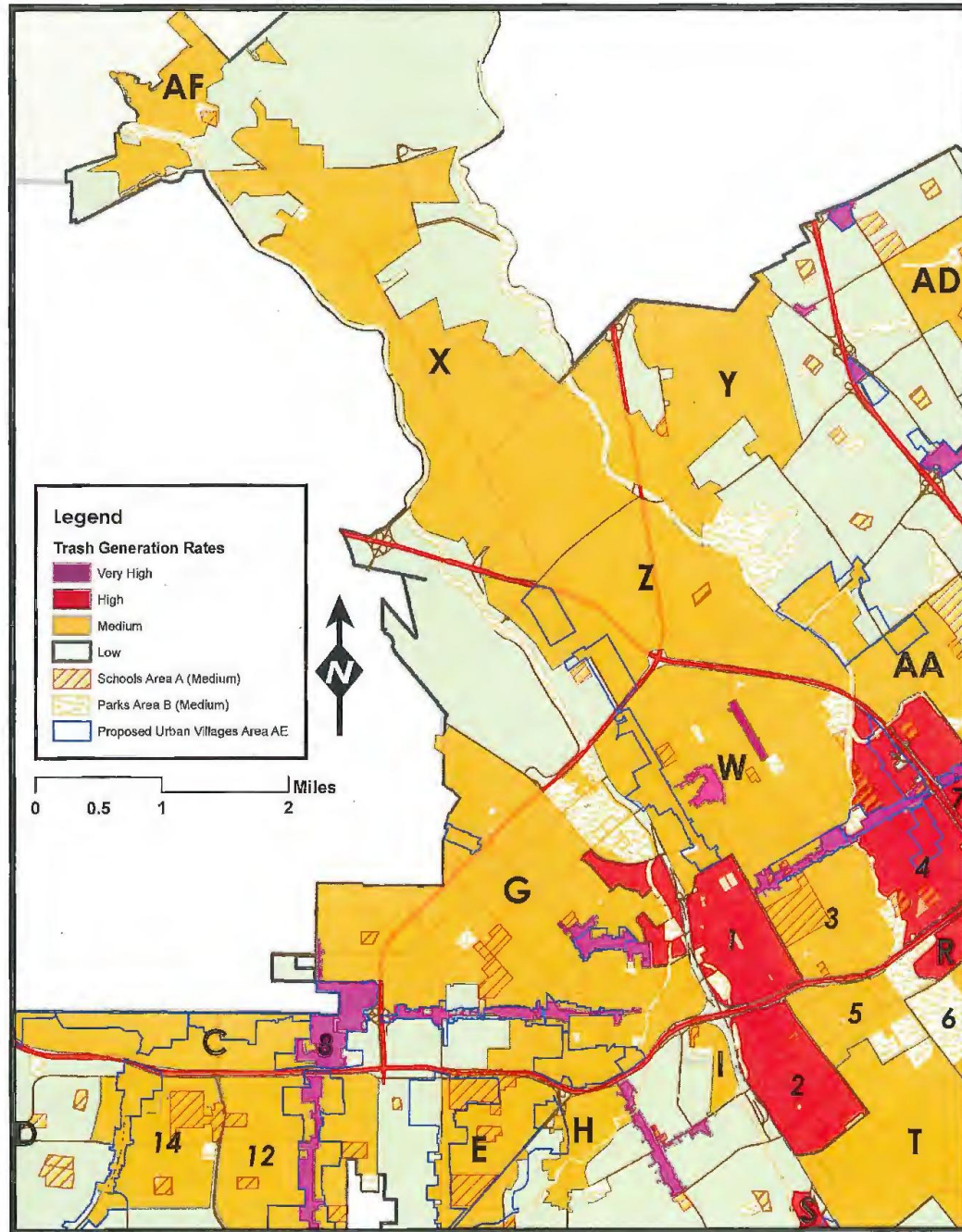
For questions, please contact Napp Fukuda, Deputy Director, at (408) 793-5353.

Attachment A - Trash Management Areas San José



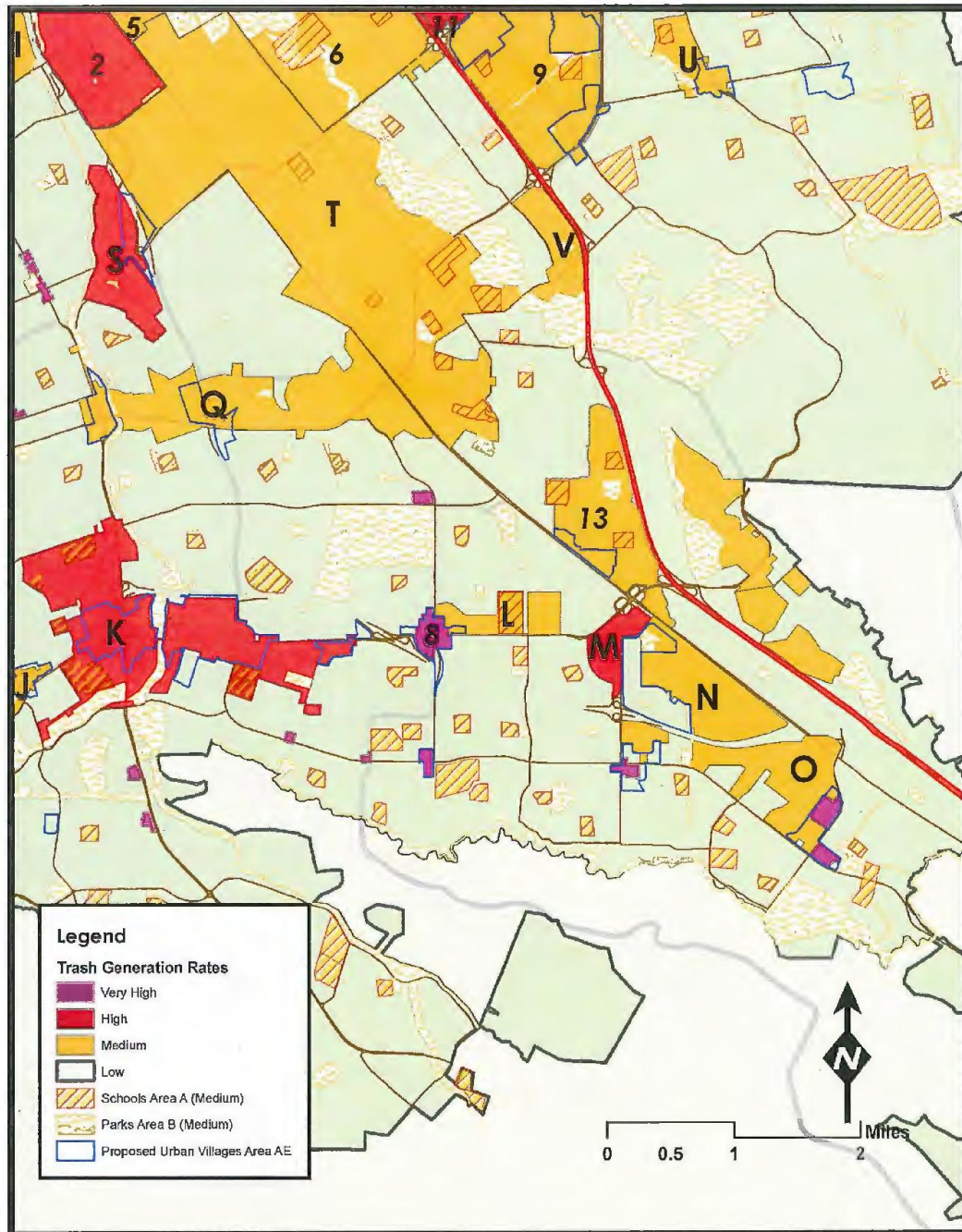
A - 1

Attachment A - Trash Management Areas North San José



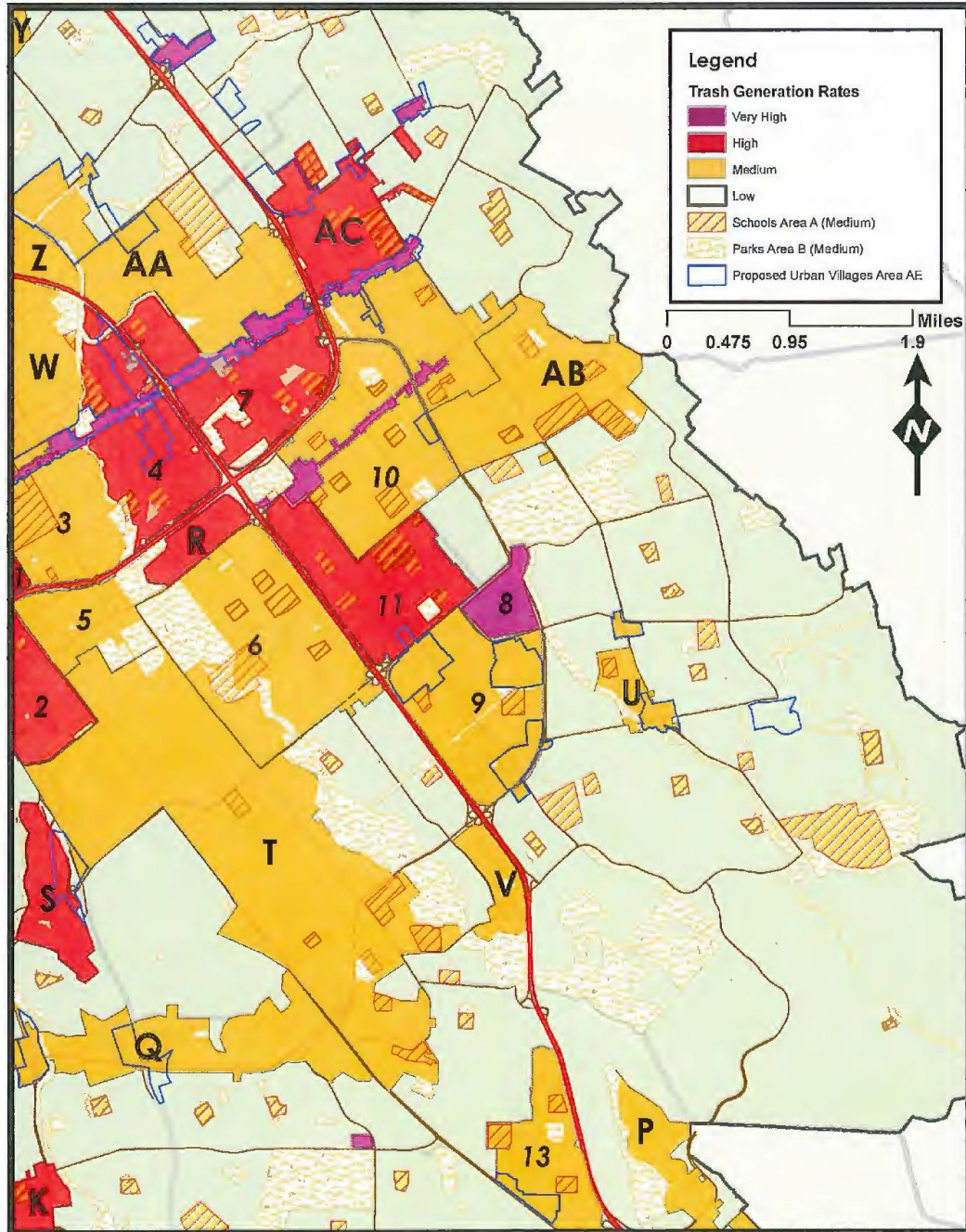
A - 2

Attachment A - Trash Management Areas South San José



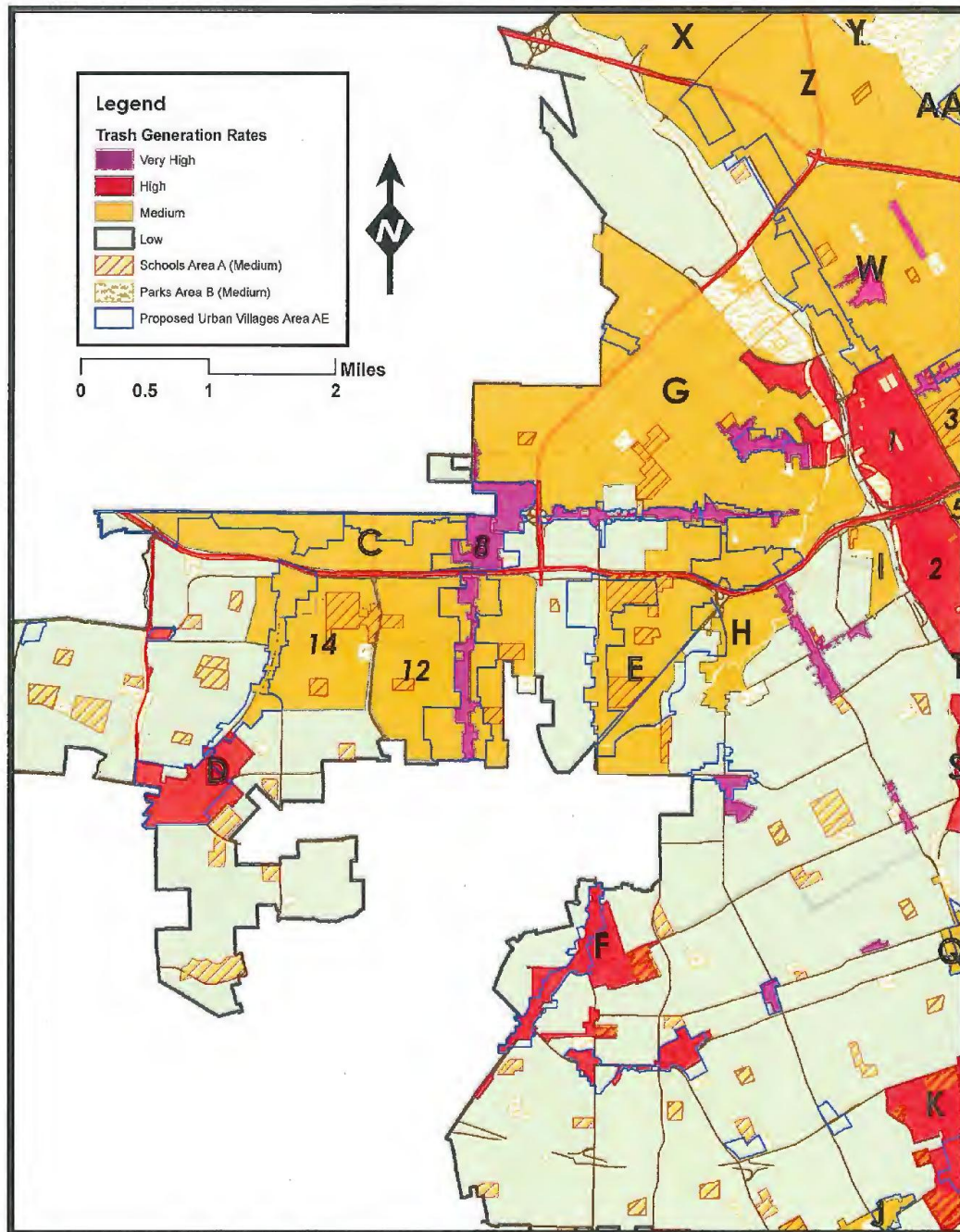
A - 3

Attachment A - Trash Management Areas East San José

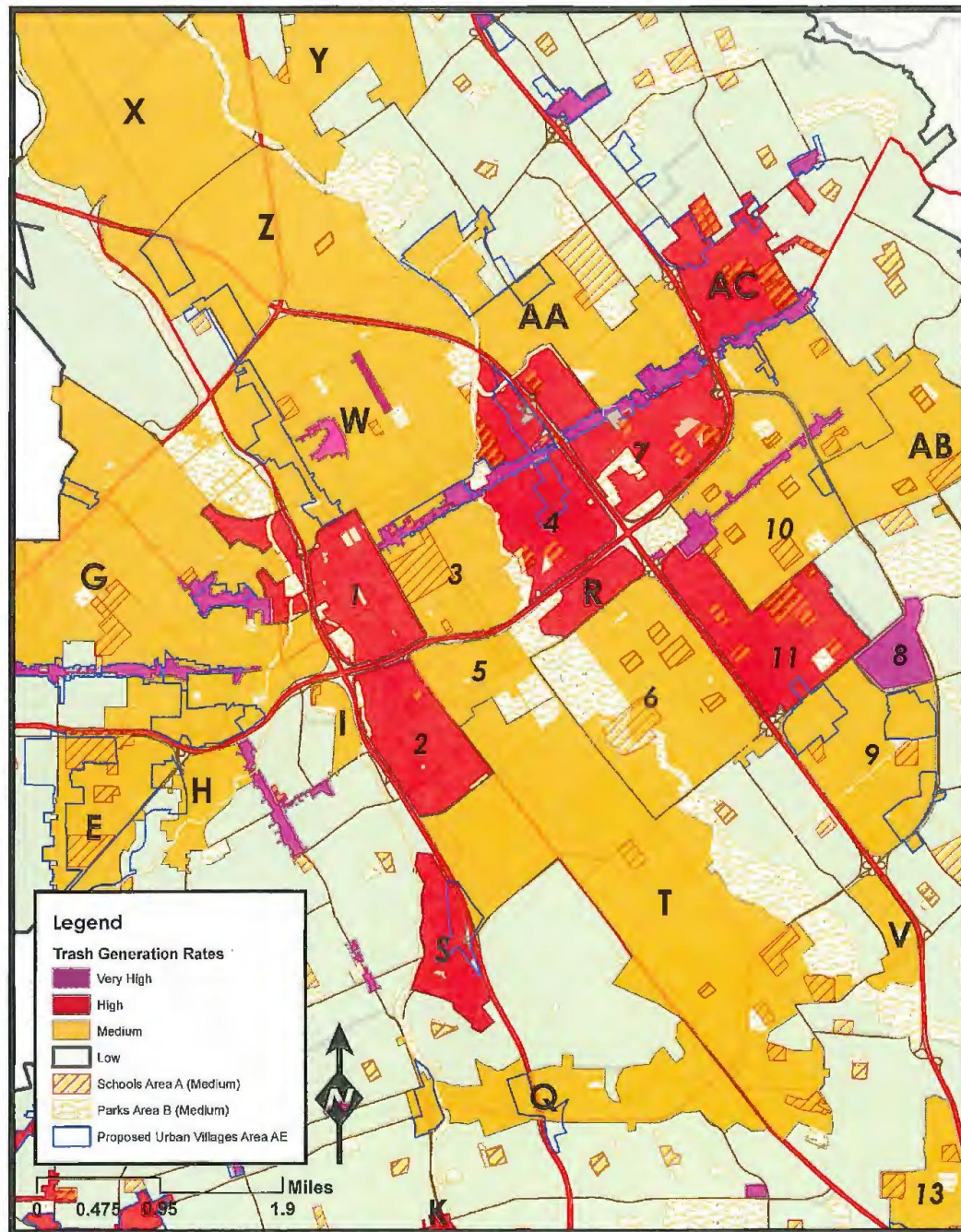


A - 4

Attachment A - Trash Management Areas West San José



Attachment A - Trash Management Areas Downtown San José



A - 6

Attachment B - Trash Management Area Summary

	Preliminary Trash Management Area ID Number	Location Description	Trash Generation (VH, H, M, L)	Full-Capture Treatment Devices	Post-MRP Enhanced Street Sweeping	On-land Trash Cleanups	Partial-Capture Treatment Devices	Anti-littering and Illegal Dumping Enforcement Activities	Improved Trash Bins/Container Management	Creek, Channel, Shoreline Cleanups	Single-Use Carryout Bag Policies	Polystyrene Foam Food Service Ware Policies	Public Education and Outreach Programs	Community Engagement: Clean Creeks, Healthy Communities	Community Engagement: Clean Streets Pilot	Community Engagement: Anti-Gang & Blight Interdept Coord
Implemented in Short-Term Plan	1	Downtown Business Improvement District	VH, H, M, L	X					X		X	X	X			
	2	Neighborhood east of 87 and West of S 1st St and South past Alma to Industrial area just North of San Jose Ave	VH, H, M, L	X	X				X		X	X	X			
	3	Area east of 4th St to Coyote Creek and south of Santa Clara Business District to 280	VH, H, M, L	X					X		X	X	X			
	4	Area east of Coyote Creek to 101 and south of Santa Clara Business District to 280	VH, H, M, L	X	X	X		X	X	X	X	X	X			
	5	Area south of 280 and East of S 1st St to Coyote Creek and south to Alma Ave	VH, H, M, L	X	X			X	X	X	X	X	X			
	6	Area bordered by Senter Rd, Story Rd, 101, and Tully Rd	VH, H, M, L	X		X		X	X	X	X	X	X			
	7	Area bordered by 101 and 280/680 south of Alum Rock Business District	VH, H, M, L	X		X			X		X	X	X			
	8	Business Districts - Citywide	VH, M, L			X		X	X		X	X	X			
	9	Area east of 101 from Tully south to Capitol and east to Quimby Rd	H, M, L	X			X		X		X	X	X			
	10	Ocala to Capitol and Murtha and North to Alum Rock Business District not included in business districts	VH, H, M, L	X					X		X	X	X			
	11	Area east of 101 and north of Tully Rd not included in management area 21	H, M, L						X		X	X	X			
	12	Area bordered by 280, 17, and south of Payne that is not part of the Winchester Business District	H, M	X	X				X		X	X	X			
	13	Area roughly bordered by Branham Lane E, 101, Blossom Hill Rd, and Monterey Rd	H, M, L						X		X	X	X			
	14	Area bordering Saratoga Ave south of 280 to San Tomas Expressway and south to Payne Ave	H, M, L						X		X	X	X			

Attachment B - Trash Management Area Summary

Preliminary Trash Management Area ID Number	Location Description	Trash Generation (VH, H, M, L)	Full-Capture Treatment Devices	Post-MRF Enhanced Street Sweeping	On-Street Trash Cleanups	Partial-Capture Treatment Devices	Anti-Littering and Illegal Dumping Enforcement Activities	Improved Trash Bin/Container Management	Creek, Channel, Shoreline Cleanups	Single-Use Carryout Bag Policies	Polystyrene Foam Food Service Ware Policies	Public Education and Outreach Programs	Community Engagement: Clean Creeks, Healthy Communities	Community Engagement: Clean Streets Pilot	Community Engagement: Anti-Gang & Night Intercept Coord
To be Implemented in Long-Term Plan	A	Parks - Citywide	M		X				X	X	X	X			X
	B	Schools - Citywide	M		X			X				X			X
	C	Area north of 280 from Lawrence Expressway to Santana Row	H, M, L							X	X	X			
	D	Westgate Mall and surrounding area	H, M	X		X	X	X		X	X	X			
	E	Bascom Ave south of 280 to Hamilton Ave and Southeast Expressway	H, M, L	X	X	X	X	X	X	X	X	X		X	
	F	Higher loading areas surrounding Bascom Ave and Camden Ave, extending East to Hilldale Ave and Ross Ave	H, M, L	X	X	X	X	X		X	X	X		X	
	G	Area West of 87 and north of 280 not included in business districts	VH, H, M, L	X	X	X	X	X	X	X	X	X	X	X	
	H	Area west of Lincoln Ave and south of 280 around Meridian Ave	H, M, L		X	X	X	X	X	X	X	X	X	X	
	I	Neighborhood roughly bordered by 87, Willow St, and Delmas	H, M, L		X	X	X	X		X	X	X		X	
	J	Princeton Plaza and surrounding neighborhood to the West	H, M, L	X	X		X	X		X	X	X		X	
	K	High loading neighborhoods and retail from Branham Lane and Almaden Expressway south to Blossom Hill continuing along Blossom Hill Rd to Chesbro Ave	H, M, L	X	X	X	X	X	X	X	X	X	X	X	
	L	Medium loading neighborhoods along north side of Blossom Hill Rd from Snell Ave to Dobie Dr	M		X	X	X	X		X	X	X		X	
	M	High loading areas near intersection of Cottle Rd and Poughkeepsie Rd	H, M	X	X	X	X	X		X	X	X		X	
	N	Area bordered by Charlotte Rd, Great Oaks Pkwy, and 85	M, L			X	X	X		X	X	X		X	
	O	Kaiser San José and area roughly bordered by 85, Bernal Rd, and Santa Teresa Blvd	H, M, L			X	X	X		X	X	X		X	
	P	Medium loading industrial and commercial areas along Hellyer Rd south to Silicon Valley Rd and west to 101	M, L		X	X	X	X		X	X	X		X	
	Q	High loading areas along Capitol Expressway from Almaden Expressway east to Monterey	H, M, L	X	X	X	X	X		X	X	X		X	
	R	Area east of Coyote Creek south of 280 to 501 and north of Story Rd	VH, H, M, L	X	X	X	X	X		X	X	X		X	
	S	High loading area around Almaden Expressway and Almaden Rd west of 87	H, M	X	X	X	X	X		X	X	X		X	
	T	Area south of management areas 33 & 34, west of Senter Rd extending south to areas surrounding Capitol east of Monterey	VH, H, M, L	X	X	X	X	X		X	X	X		X	
	U	High loading areas along White Rd from Quimby south to Aborn Rd	H, M	X	X	X	X	X	X	X	X	X		X	

Attachment B - Trash Management Area Summary

	Preliminary Trash Management Area ID Number	Location Description	Trash Generation (VH, H, M, L)	Full-Capture Treatment Devices	Post-MBP Enhanced Street Sweeping	On-land Trash Cleanups	Partial-Capture Treatment Devices	Recycling and Illegal Dumping Enforcement Activities	Improved Trash Bin/Container Management	Creek, Channel, Shoreline Cleanups	Single-Use Carryout Bag Policies	Polyethylene Foam Food Service Ware Policies	Public Education and Outreach Programs	Community Engagement: Clean Creeks, Healthy Communities	Community Engagement: Clean Streets Pilot	Community Engagement: Anti-Gang is Right Here/Right Now
To be Implemented in Long-Term Plan	V	Area roughly bordered by McLaughlin Ave, Capitol, 201, and Yerba Buena Rd	H, M		X	X	X	X	X		X	X	X		X	
	W	Area east of 201, north to 280 and 301 and south to Santa Clara St Business District if not part of Downtown or other Business Districts	VH, H, M, L				X	X	X		X	X	X		X	
	X	North San José between Guadalupe and Coyote Creeks from Brolaw to north of 237	H, M, L				X	X	X	X	X	X	X			
	Y	Mainly Industrial area in North San José East of Coyote Creek, South of Montague Expressway surrounding Lundy Ave.	H, M, L				X	X	X	X	X	X	X		X	
	Z	Area south of Brolaw between Guadalupe and Coyote Creeks (includes Skyport, Old Bayshore, and Commercial areas)	H, M, L				X	X	X		X	X	X			
	AA	Berryessa Rd at Coyote Creek south through King Rd area to Alum Rock Business District	VH, H, M, L	X	X	X	X	X	X		X	X	X		X	
	AB	Neighborhood roughly bordered by Capitol, Story Rd, Clayton/Mount Pleasant Rds, and Oaks/Marten Aves	H, M, L	X	X	X	X	X	X		X	X	X		X	
	AC	Area East of 680 at McKee Rd south to Alum Rock Business District; La Peña Drive McKee Rd	VH, H, M, L	X	X	X	X	X	X	X	X	X	X		X	
	AD	Neighborhood along Hoscester between Merrill and Piedmont	H, L					X	X	X	X	X	X		X	
	AE	Planned Urban Villages throughout the City	H, M	X	X	X	X	X	X		X	X	X		X	
	AF	Adviso	VH, M, L		X	X	X	X	X	X	X	X	X		X	
	AG	Remaining City Areas	L	X	X				X		X	X	X			

Preliminary Trash Management Areas were delineated according to existing or planned trash reduction actions. These actions include planned pilots such as the installation of automatic retractable screens and neighborhood business association partnerships as well as ongoing efforts such as Clean Creeks, Healthy Communities; existing full trash capture installations; and expanded street sweeping signage restrictions.

Trash Management Areas that have been identified but for which no program of trash control measures has yet been identified, are listed with letters rather than numbers. Possible control measures appropriate for those areas is identified in GREY pending additional analysis and planning. Trash Management Plans for these areas will be reported out in 2014.